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SOCIOLOGY AND SOCIAL PROGRESS

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SOCIOLOGY AND SOCIAL PROGRESS

*A HANDBOOK FOR STUDENTS OF
SOCIOLOGY*

COMPILED BY

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DAVID A. WELLS PROFESSOR OF POLITICAL ECONOMY
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PREFACE

The problem of human welfare, before which all others seem trivial in comparison, is not to be understood without the widest attainable knowledge of things pertaining to man. Up to the present time the economist is undoubtedly the one who has made the most searching and the most effective study of this problem. But other light is needed and a wider view is necessary than the economist is in the habit of taking. The present volume is compiled for the purpose of presenting to the student, in convenient form, material for this wider view. It is based upon twelve years of college and university teaching. The selections presented are those which the compiler has found by experience to be the most instructive, the most stimulating, and the most thought-provoking. No attempt has been made to select only such passages as embody the compiler's views, or even to select such as are invariably sound and accurate. The fact that a passage has proved brilliantly suggestive and provocative of serious inquiry has, in several cases, been the chief reason for including it.

It is the hope of the compiler that this volume may prove useful both to the college student and to the general reader. In college classes it is designed to be used as supplementary to an elementary text-book, as collateral reading to a course of lectures, or as a basis for class-room discussions. The latter is by far the most effective method yet devised for the teaching of the social sciences, and in connection with this method the compiler ventures to hope that this volume may prove especially useful.

The compiler wishes to express here his gratitude for the many courtesies which he has received from authors and publishers. He is under especial obligation to Messrs. D. Appleton & Co.,

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A. C. Armstrong & Co., Adam and Charles Black, Albert Fontemoing, Henry Holt & Co., Houghton, Mifflin & Co., the Macmillan Company, James Pott & Co., and Charles Scribner's Sons; also to the editors of the *Political Science Quarterly*, and of *The Annals of the American Academy of Political and Social Science*, and to the following gentlemen: Professors Simon N. Patten, Lester F. Ward, Edward Van Dyke Robinson, and William Z. Ripley, and Messrs. A. Cleveland Hall and D. MacGregor Means.

He wishes also to acknowledge his indebtedness to many of his former students, whose interest and enthusiasm, whose criticisms and suggestions in the regular class-room discussions, and whose stimulating — often puzzling — questions, both within and without the class room, have been a guide in the selection of the material for this book.

T. N. CARVER

HARVARD UNIVERSITY
January, 1906

CONTENTS

	PAGES
I. INTRODUCTION	1-14
PART I. THE NATURE, SCOPE, AND METHOD OF SOCIOLOGY	
II. Characteristics of the Positive Method in its Application to Social Phenomena, by Auguste Comte	15-64
III. Relation of Sociology to the Other Departments of Positive Philosophy, by Auguste Comte	65-70
IV. The General Distinction between Sociology and the Specific Social Sciences, by J. H. W. Stuckenberg	71-87
PART II. SOCIOLOGY AS A STUDY OF SOCIAL PROGRESS—THE DIRECTION OF SOCIAL PROGRESS	
V. Social Dynamics; or Theory of the Natural Progress of Human Society, by Auguste Comte	88-115
VI. A Definition of Progress, by Lester F. Ward	116-120
VII. The Evolution of Society, by John Fiske	121-126
VIII. The Transition from a Pain Economy to a Pleasure Econ- omy, by Simon N. Patten	127-132
IX. War and Economics in History and in Theory, by Edward Van Dyke Robinson	133-173
PART III. THE FACTORS OF SOCIAL PROGRESS	
A. THE PHYSICAL AND BIOLOGICAL FACTORS	
X. Influence exercised by Physical Laws over the Organiza- tion of Society and the Character of Individuals, by Henry Thomas Buckle	174-270
XI. The Zone of the Founders of Religion, by Oscar Peschel	271-275
XII. Sexual Selection in Relation to Man, by Charles Darwin	276-391
XIII. National Life from the Standpoint of Science, by Karl Pearson	392-409
XIV. The Prolongation of Infancy, by John Fiske	410-418

increased by attempts to explain what society is like. He has a fairly definite idea already, though he may not be able to state his idea in specific terms. But, as Professor Marshall reminds us, our most familiar concepts are frequently the most difficult to define. It is very difficult to define a house, yet most of us have a fairly clear idea as to what a house is. One might add that, even if a house could be defined, the definition would add little or nothing to our knowledge. The same may be said of a definition of society. Since our science deals with a subject which is so familiar, at least in its superficial aspects, to every student of mature mind, its formalities are rather less important than those of some of the other sciences where the subject-matter lies outside the experience and observation of everyday life.

After all, the student of sociology is most vitally interested in gaining a knowledge of the social processes and the relations of cause and effect among social phenomena. This knowledge is absolutely essential to any intelligent effort at social improvement, and social improvement is the only worthy aim of the student. Even the early history of society and the origin of social institutions, interesting as these subjects are to the scientifically curious, derive their chief value from the light which they may throw on the problem of social improvement. But more valuable even than historical study is the analytical study of the social processes and the social forces which are at work in the society of the present, and which may be assumed to be shaping the society of the future. Any attempt to improve the society of the future must manifestly work in harmony with these forces.

It is probably safe to say that the economist is the only one of the various students of society who has accomplished much in the way of perfecting this analysis. On the purely economic side of social life considerable progress has been made in this direction, and it therefore seems probable that the method of sociology will be an expansion of the method of economics. The success with which the science of economics has been developed has been partly due to the fact that economists have strictly limited the scope of their inquiry. This was a necessary feature

of their method, at least in the early stages of the science ; but the interest of the public in some of the broader aspects of social science is increasing day by day, and it is proper therefore to raise the question whether the time is not ripe for an expansion of the method of economics into the general field of social science.

It is a favorable sign that economists are already showing a tendency to take the broad view, or to consider the bearings of economic facts and principles upon the broader questions of human progress and social development. In so far as sociology has as yet justified its existence, it is because sociologists have emphasized these broader questions more than economists have seen fit to do. However, the chief danger is that if sociology is to be developed from the economic standpoint, and by an expansion of the method of economics, the purely economic factors will be overemphasized. This seems to have been the result of most attempts at what is called the "economic interpretation of history."

One who is acquainted with the ordinary meaning of words, but unacquainted with the way this particular expression has actually been used, would probably infer that the "economic interpretation of history" meant the interpretation of historical development in the light of economic knowledge, just as the historical interpretation of economics means the interpretation of economic conditions in the light of historical knowledge. But a brief examination of those works which have attempted the economic interpretation of history reveals the fact that this expression means that economic factors have largely determined the course of history. This is the dogma, for example, to which Professor Seligman¹ applies the following thesis.

The existence of man depends upon his ability to sustain himself ; the economic life is therefore the fundamental condition of all life. Since human life, however, is the life of man in society, individual existence moves within the framework of the social structure and is modified

¹ Edwin R. A. Seligman, *The Economic Interpretation of History*, New York, Columbia University Press, 1902.

by it. What the conditions are to the individual, the similar relations of production and consumption are to the community. To economic causes, therefore, must be traced, in the last instance, those transformations in the structure of society which themselves condition the relations of social classes and the various manifestations of social life.

In so far as this statement of the thesis foreshadows the subsequent argument it occurs to one as being singularly inconclusive. One might as well say the existence of man depends upon his ability to reproduce himself, and family life is therefore, etc.; or the existence of man depends upon his ability to defend himself, and military life is therefore, etc. Thus one might go on indefinitely adding to the number of causes which "in the last instance" determine the forms of social development. If it be retorted that the methods of gaining subsistence largely determine the forms of family and military life, the reply is that the forms of military and family life and the necessities of military defense also largely determine the forms of industry. The sexual impulse is quite as elementary as the desire for food, and it is to this elementary impulse that we owe the existence of the family, though its form is more or less modified by the conditions of subsistence, as well as by the spiritual, the moral, and the military conditions of the community. As to which precedes in point of time, it would be difficult to say, and the answer would be of no value even if it could be found out. The necessities of military defense, as Spencer has well brought out in his antithesis between the industrial and the militant types of society, are quite as potent in the determination of social forms and usages, and religious and moral ideas and conceptions, as the necessities of subsistence can possibly be. Here again the question as to which precedes in point of time — the necessity for subsistence or the necessity for defense — is a matter of no consequence.

Whatever merit there may be in the dogma that the economic factors have the leading part in shaping social development and in determining the course of history, and whatever the emphasis that may properly be laid upon this dogma, there is another aspect of the "economic interpretation of history" which deserves especial consideration, and which has been largely neglected in

discussions of this topic. As has already been suggested, the "economic interpretation of history" would seem, at first sight, to mean the interpretation of historical facts in the light of one's economic knowledge. If for the term "economic knowledge" could be substituted "knowledge of human society," this statement of the doctrine would clear up much of the obscurity which exists regarding the relation of the study of economic and social conditions to the study of history. Hitherto the field has been left practically in the hands of the historian or the historical economist, who has claimed that a knowledge of history was essential to the understanding of the present economic conditions. It is true in a much stricter sense that a knowledge of the present economic and social conditions is essential to even the most elementary knowledge of history. What has been overlooked in the modern evolutionary theory of history is the fundamental principle which formed the basis of the whole evolutionary theory of modern science, namely, the principle that all past development, whether in the field of geology or biology, must be accounted for on the ground of forces and factors now at work, and which can be observed at first hand by the student. Thus a preliminary study of dynamical geology, since Sir Charles Lyell, must precede any attempt at tracing geological history. If we accept the anticataclysmic theory of history as the basis of a theory of historical development, we must likewise conclude that a study of the social factors and forces as they exist in the world about us must precede any attempt at the explanation of historical development. One might as well undertake the study of paleontology without some preliminary knowledge of biology as to undertake the study of history without some preliminary knowledge of economics or sociology. It is in this study of first-hand materials, in the observation of social activities about us, that we must get our clue to the relation of cause and effect in social and political affairs; and until we have this clue, historical facts are merely so many isolated and unconnected events. The only thing that has saved history in the past from being a mere collection of accidental, unrelated events is the fact that historians, even without special training, have had some ideas regarding causation in social and political

affairs. But this general knowledge which we call common sense, and which belongs within certain limits to every intelligent person, cannot take the place of trained observation and scientific methods of investigation. A student of paleontology might, from the few general and elementary facts which he had gathered by unscientific observation, do something in this field, but he could by no means expect to compete with the student who had made a study of biology according to scientific methods, and who had some training in scientific observation and reasoning. This is the theory of the economic or social interpretation of history to which we must finally come if we would deserve to be put in the same class with scientists working in other fields. The study of sociology must therefore be the study of the social factors and forces as they are found in the world about us; and this study will bear the same relation to history that the study of dynamical geology bears to historical geology, or as the study of biology bears to paleontology. To be sure, historical geology and paleontology again throw new light upon dynamical geology and upon biology, but it is perfectly clear where the study must begin. The same principle will apply to sociology and history, and to theoretical and historical economics.

That line of study which is ordinarily called economic theory differs from economic history not in the methods of reasoning employed but in the source of information. The one goes directly to the facts of the social and economic life of the surrounding world, while the other goes to historical documents. The one observes phenomena at first hand, the other through the media of historical records of all kinds. The distinction between the theoretical and the descriptive economist is that the one tries to find the causal connection between economic facts which come under his observation, while the other merely tries to describe them. Until one has some elementary notions regarding economic causation he is not in a position even to begin the study of economic history. He would see no more connection between a rise of British consols and Napoleon's defeat at Waterloo than he would see between Napoleon's defeat and an eclipse of the moon. But an opinion regarding economic causation is an economic theory.

What economists and historians need, therefore, is not an opinion as to the relative importance of the various factors which have determined the course of history, but a clear perception of the importance of a first-hand study of the factors and forces in the contemporary social world. Following the suggestion of the anti-cataclysmic theory of geological and biological development, the present writer would like to lay down the following thesis as a challenge.

*Every great historical epoch and every variety of social organization must be explained on the basis of factors and forces now at work, and which the student may study at first hand.*¹

Our conclusion as to the relation of sociology to economics is, therefore, that sociology is merely an expansion of the method of economics to include a study of many factors in social development which are not ordinarily considered by the economist; while the relation of sociology to history is the same as that between dynamical geology and historical geology, or between biology and paleontology. Sociology is a study at first hand of those factors and forces which govern social phenomena and the relation of cause and effect among them, whereas history is an attempt to trace the actual course of social development in the past. Though the study of history is highly essential to a thorough understanding of the principles of sociology, a knowledge of the principles of sociology is vastly more essential to any thorough understanding of history.

It is the opinion of the present writer that whatever aid the study of sociology may furnish to the study of the history of the past, it can hardly justify its existence unless it furnishes us a theory of progress which will enable us to shape the policies of society with a view to future improvement. In other words, the fundamental task of the sociologist is to furnish a theory of social progress.

The first difficulty in the way of the student bent upon the performance of that task is that of defining progress itself. Generally speaking the idea of human progress carries with it

¹ Cf. the author's article on the "Economic Interpretation of History," *Journal of Political Economy*, Vol. II, No. 1, pp. 93-99.

the idea of human well-being. Social progress and social improvement, from the standpoint of human happiness, are ideas so closely connected in the popular mind that it is almost impossible to separate them. However, the late Herbert Spencer¹ combats this conception as being shifting and indefinite, and denies that the improvement in the well-being of the people is necessarily a mark of progress. "Social progress," says he, "is supposed to consist in the making of a greater quantity and variety of the articles required for satisfying men's wants, in the increasing security of person and property, in widening freedom and action; whereas, rightly understood, social progress consists in those changes of structure in the social organism which have entailed these consequences. The current conception is a teleological one. But rightly to understand progress we must understand the nature of these changes considered apart from our interests; cease, for example, to regard the geological modifications which take place in the earth as modifications which fit it for the habitation of man, and as therefore constituting geological progress. We must ascertain the character common to these modifications, whether in the physical, the biological, or the social world, — the law to which they all conform." His idea therefore is that there must be one universal law of progress which dominates the development of the physical universe out of primeval chaos, the development of the present highly diversified forms of animal and vegetable life out of the primordial cell or protoplasm, and the development of the present highly organized human societies out of the primitive horde of human beings. This universal principle of progress is simply the change from homogeneity to heterogeneity. "From the earliest traceable cosmical changes down to the latest results of civilization we shall find that the transformation of the homogeneous into the heterogeneous is that in which progress essentially consists" (page 10, *op. cit.*).

That a universal principle of development is desirable, in fact essential, as a basis for a theory of social progress must be admitted. But it seems that such a principle can be found

¹ Progress, Its Law and Cause, Vol. I, "Essays Scientific, Political, and Speculative," pp. 8-62.

without sacrificing the idea of well-being as a mark of progress. Back of this change from homogeneity to heterogeneity lies the principle of adaptation so familiar to all students of evolution. Now adaptation in human society is necessarily connected with well-being. A society which has undergone such modifications internally and externally as adapt it to its conditions is a society which enjoys a high degree of well-being ; and the society which is ill-adapted to its conditions is a society which does not enjoy a high degree of well-being. While the term "well-being" can be applied only within the field of sentient life, "adaptation" is a term which may apply to all existence, sentient or nonsentient. But within the sphere of sentient existence adaptation and well-being are so inseparably connected that they may almost be said to mean the same thing. Therefore it is assumed in this work that well-being is a mark of progress, though progress is defined in terms of adaptation.

This adaptation which takes place in human society is either passive or active. By passive adaptation is meant the modification of the species itself to suit the conditions under which it lives ; and by active adaptation is meant the modification of the conditions to suit the species. Man has been defined as a being who adapts his surroundings to himself, whereas other animals are adapted to their surroundings. If, for example, the climate is cold, other animals must develop fur, or blubber, or feathers, or some other means of withstanding cold or protecting themselves from it ; whereas man manufactures clothing, builds a fire, or constructs a house. If food is to be obtained from the sea, other animals must develop webfeet, or flippers, or some other means of propelling themselves through the water ; whereas man builds a boat and makes fishing tackle. If food is to be transported long distances, other animals must, like the pelican, develop a pouch, or like the camel, develop a hump and a stomach lined with cisterns ; whereas man learns to cure his food and to build transportation systems. If the opposite sex is to be won, other animals must develop brilliant plumage, or antlers, or a mane ; whereas man substitutes the barber's and the haberdasher's arts, clothes himself in fine raiment, or furnishes economic support.

In a multitude of other ways man, by taking thought, — by various ingenious devices, — avoids the necessity of being himself physiologically modified to suit his conditions. However, this difference, great as it is, is a difference of degree, for within narrow limits other animals also modify their surroundings, as when birds build nests or beavers construct dams or mud houses, and even where certain animals dig their own burrows instead of depending upon natural caves. But the efforts which the most ingenious and intelligent of the animals make in this direction are unworthy of comparison with the magnificent results of the genius of civilized man. On the other hand, men themselves have to undergo certain modifications. Races dwelling in high altitudes, who must breathe a rarified atmosphere, develop larger lung capacity. Those dwelling in cold climates develop better circulation and greater power of withstanding cold. Similarly, inhabitants of malarial regions develop a kind of immunity from malaria. But the degree of modification which takes place in the human organism is vastly reduced by man's power over his environment. If he were unable to construct shelters, build fires, and manufacture clothing, he would have to undergo vastly greater modification than is now necessary in order to live in such cold climates as are actually inhabited. Again, it might be urged with some degree of fairness that it is due to a kind of passive adaptation that man is enabled to assume the active rôle; that is, it is due to a larger brain development, and therefore he is passively modified in one direction, namely, in the direction of larger mentality, in order to avoid passive modification in other directions. However, the meaning of the term "active adaptation" is probably well enough understood to answer the purposes of this discussion.

In the analysis of the factors of social progress it seems wise to subdivide the work on the basis of a classification of those factors. We shall therefore group the selections included in this part of the work under four heads: (1) the physical and biological factors; (2) the psychic factors; (3) the social and economic factors; (4) the political and legal factors.

Under the first group of factors we are able to supply a list of selections which cover the ground fairly well. Under the second

group, namely the psychic factors, the material is fairly complete, except that no very satisfactory selection was found covering a most important psychic factor, namely, the power of idealization. This may be defined not very inaccurately as the power of *making believe*,—a factor which sociologists have scarcely appreciated as yet. We have such popular expressions as “making a virtue of necessity,” which indicate that there is a certain popular appreciation of the real significance of this power, but we have very little in the way of a scientific appreciation of it.

One of the greatest resources of the human mind is its ability to persuade itself that what is necessary is noble, or dignified, or honorable, or pleasant. For example, the greater part of the human race has been forced to live under conditions of almost incessant warfare. War being a necessity from which there was no escape, it was a great advantage to be able to glorify it, to persuade themselves that it was a noble calling,—in other words, a good in itself. In the first place, this tended to relieve the mental distress which must otherwise have been the lot of those living in constant apprehension of so hideous and in every way loathsome a thing as war. Again, the strength of any given tribe in warfare would be greatly increased by the fact that war had been glorified and the warrior held in high honor and esteem. This would make better warriors of its honor-loving men. It would make war the goal and ambition of its youth. While for the human race as a whole this doubtless worked incalculable harm, yet for each individual tribe, being unable to free itself from the necessities of war, this was a great resource.

Another example is found in the case of work. Work is still a necessity as imperious as war ever was. Looked at frankly and truthfully work is a disagreeable necessity and not a good in itself. Yet by persuading ourselves that work is a blessing, that it is dignified and honorable, our willingness to work is materially increased, and therefore the process of adaptation is facilitated; in other words, progress is accelerated. Among the most effective agencies for the promotion of progress, therefore, must be included those which stimulate this power of idealization. He who in a warlike age can glorify war materially increases the

military strength of his nation. He who in an industrial age can glorify work materially increases the industrial strength of his nation. In short, he who in any age helps to idealize those factors and forces upon which the progress of his age depends, is perhaps the most useful man, the most powerful agent, in the promotion of human well-being, even though from the strictly realistic point of view he only succeeds in making things appear other than they really are. From the sociological point of view this is the mission of art and preaching of all kinds.

Under the social and economic factors the greatest difficulty was the absence of any satisfactory selection covering what may be called the storing of surplus energy. It is well known that nature everywhere seems intent on producing a kind of equilibrium or balance. Grass tends to grow as thick as the conditions of soil and moisture will permit. If for any reason it becomes too thick, nature restores the equilibrium by the destruction of the surplus. If it becomes too thin, the powers of reproduction are so great that nature again speedily restores the equilibrium by rapid multiplication. This is virtually true of all forms of animate as well as inanimate life, and man is no exception. In a state of nature the tendency is for as many men to live in any habitat as the conditions of soil and climate and the depredations of enemies will permit. Now civilization is essentially a storing of surplus energy, and is due to the fact that men have had more energy to expend than was necessary to procure subsistence. The first step in civilization, from this point of view, cannot be accounted for, unless it is explained how this accumulation took place and nature's universal law of equilibrium was defeated. It seems probable that some kind of despotism was a necessary first step. The primitive despot, the strong man, the brutal oppressor though he may have been, yet succeeded in wresting from the people by the strength of his arm or the weight of his fist a share of their subsistence. If they could not live on what was left to them, enough of them must die to restore the equilibrium. He, however, secured a surplus. Though in most cases he probably consumed his surplus in gluttony and riotous living, yet in a few cases the whim seized him to erect a monumental tomb to

his ancestors, a temple to his god, or a palace for himself. This may not have been worth doing, for it was done at the cost of despotism and oppression, and these are odious. Nevertheless something *was* done; something *was* saved from the universal process of dissipation. We may have our opinion as to which alternative we prefer. If this had not been done, the life history of that tribe would probably have continued, as it had been for ages before, to be written in these brief terms: They were born, they bred and died, generation after generation in endless succession. Human life under such conditions is not worth much; but if at the cost of despotism, oppression, and injustice something else is added to their achievements, it may have been worth while after all. This view is no defense of despotism in itself, especially under conditions in which there are other agencies for the accumulation and storing of surplus energy. Slavery, religious fear, aristocracy, — these have all doubtless been agencies for the accomplishment of the same purpose; and though they are all equally odious in themselves, they may have been means of saving the race from a worse alternative. However, when the conception of social justice had reached a point where it could distinguish between individual rights and guarantee to each individual the results of his own labor, instead of placing him at the mercy of those members of his tribe who were most gluttonous or the most rapid breeders, despotism, aristocracy, slavery, paternalism of all kinds ceased to be necessary for the accomplishment of this result, namely, the storing of surplus energy, and they therefore have no longer any justification for their existence.

The political and legal factors have been divided into two heads: (1) the problem as dealt with, How may the governor or ruler win and retain the power of ruling; (2) how far and under what conditions ought that power to be exercised. Under the first head in Machiavelli's chapters and in the admirable paraphrase by the writer who goes under the name of Henry Chambernowne are discussed the arts and devices by which the ruler or the would-be ruler may obtain his power. Under the second head are discussed the questions of state interference, — the limits

to the rightful authority of the state over the individual. This distinction is not usually made, and the compiler gives as his reasons the belief that the essential differences between democracy and autocracy are not so great as are popularly imagined. It is a pure fiction that under a democracy the people rule themselves. They are governed by rulers as truly as they are in an autocracy. But there is this very important difference, — important enough, it would seem, to make even the most pessimistic highly pleased with the results of democracy, — that in a democracy the people who are governed have constitutional methods of giving or withholding their consent, whereas in an autocracy their only method of withholding consent is revolution. We in America are as truly governed by our leaders as are the inhabitants of Russia or Turkey, but we have the incalculable advantage of being able legally, through regularly constituted channels, to express our assent or dissent to the acts of our governors; whereas the citizens of the other countries named have no means except through the administration of poison or the use of the dynamite bomb. Holding this view of democracy, it seemed to the compiler that the first problem of the student of government is to find out how rulers or governors manage to secure their power. He also recognizes that in democratic countries the boss is a factor to be reckoned with as truly as the monarch is in a monarchical country. In fact, they are very much alike; they are apt to be the same kind of men, though we may thank our stars that our bosses have not become hereditary.

Throughout the work the compiler has avoided over-emphasis upon the organic concept of society. This is a concept which is so familiar that the labored attempts of writers in recent years to perfect the analogy between society and an organism seem wasted energy. The old fable of the "belly and the members" and St. Paul's argument beginning, "For as the body is one and hath many members," etc. (First Epistle to the Corinthians xii. 12-28), show clearly enough that the comparison between society and an organism has been familiar for a long time.

PART I—THE NATURE, SCOPE, AND METHOD OF SOCIOLOGY

II

CHARACTERISTICS OF THE POSITIVE METHOD IN ITS APPLICATION TO SOCIAL PHENOMENA ¹

In every science conceptions which relate to method are inseparable from those which relate to the doctrine under consideration. The method has to be so varied in its application, and so largely modified by the complexity and special nature of the phenomena, in each case, that any general notions of method would be too indefinite for actual use. If, therefore, we have not separated the method from the doctrine in the simpler department of science, much less should we think of doing so when treating of the complex phenomena of social life, to say nothing of the great feature of this last case, — its want of positivity. In the formation of a new science the general spirit of it must be seized before its particular parts can be investigated ; that is, we must have some notion of the doctrine before examining the method, and then the method cannot be estimated in any other way than by its use. Thus, I have not to offer a logical exposition of method in social physics before proceeding to the science itself ; but I must follow the same plan here as in the case of the anterior sciences, — ascertaining its general spirit, and what are the collective resources proper to it. Though these subjects may be said to belong to the science itself, we may consider them as belonging to the method, as they are absolutely necessary to direct our understandings in the pursuit of this difficult study.

¹ From *The Positive Philosophy of Auguste Comte*, translated by Harriet Martineau, Vol. II, chap. iii, London and New York, 1853.

In the higher order of sciences—in those which are the simplest and most advanced—the philosophical definition of each was almost sufficient to characterize their condition and general resources, to which no doubt could attach. But the case is otherwise with a recent and extremely complex study, the very nature of which has to be settled by laborious discussions, which are happily needless in regard to the preceding sciences. In treating of biology we found it necessary to dwell upon preparatory explanations which would have seemed puerile in any of the foregoing departments, because the chief bases of a science about which there were still so many disputes must be indisputably settled before it could take rank in the positive series. It is evident that the same process is even more needful, and must be more laborious, in the case of the science of social development, which has hitherto had no character of positivity at all, and which some of the ablest minds of our time sentence never to have any. We must not be surprised then if, after applying here the simplest and most radical ideas of positive philosophy, such as would indeed appear trivial in their formal application to the more advanced sciences, the result would appear to many, even among the enlightened, to constitute too bold an innovation, though the conditions may be no more than the barest equivalent of those which are admitted in every other case.

INFANTILE STATE OF SOCIAL SCIENCE

If we look with a philosophical eye upon the present state of social science, we cannot but recognize in it the combination of all the features of that theologico-metaphysical infancy which all the other sciences have had to pass through. The present condition of political science revives before our eyes the analogy of what astrology was to astronomy, alchemy to chemistry, and the search for the universal panacea to the system of medical studies. We may, for our present purpose, consider the theological and metaphysical polities together, — the second being only a modification of the first in its relation to social science. Their attributes are the same, consisting, in regard to method, in the preponderance

of imagination over observation; and, in regard to doctrine, in the exclusive investigation of absolute ideas; the result of both of which is an inevitable tendency to exercise an arbitrary and indefinite action over phenomena which are not regarded as subject to invariable natural laws. In short, the general spirit of all speculation at that stage is at once ideal in its course, absolute in its conception, and arbitrary in its application; and these are unquestionably the prevailing characteristics of social speculation at present, regarded from any point of view whatever. If we reverse all the three aspects, we shall have precisely the spirit which must actuate the formation of positive sociology, and which must afterwards direct its continuous development. The scientific spirit is radically distinguished from the theological and metaphysical by the steady subordination of the imagination to observation; and though the positive philosophy offers the vastest and richest field to human imagination, it restricts it to discovering and perfecting the coördination of observed facts, and the means of effecting new researches; and it is this habit of subjecting scientific conceptions to the facts whose connection has to be disclosed, which it is above all things necessary to introduce into social researches; for the observations hitherto made have been vague and ill-circumscribed, so as to afford no adequate foundation for scientific reasoning; and they are usually modified themselves at the pleasure of an imagination stimulated by the most fluctuating passions. From their complexity and their closer connection with human passions, political speculations must be detained longer than any others in this deplorable philosophical condition in which they are still involved, while simpler and less stimulating sciences have successively obtained emancipation; but we must remember that all other kinds of scientific conception have gone through the same stage, from which they have issued with the more difficulty and delay exactly in proportion to their complexity and special nature. It is, indeed, only in our own day that the more complex have issued from that condition at all, as we saw to be the case with the intellectual and moral phenomena of individual life, which are still studied in a way almost as anti-scientific as political phenomena

themselves. We must not, then, consider that uncertainty and vagueness in observation are proper to political subjects. It is only that the same imperfection which has had its day throughout the whole range of speculation is here more intense and protracted; and the same theory which shows how this must be the case gives us full assurance of a philosophical regeneration in this department of science analogous to that which has taken place in the rest, though by means of severer intellectual difficulty, and the embarrassment which may arise from collision with the predominant passions of men—a liability which cannot but stimulate the endeavors of real thinkers.

THE RELATIVE SUPERSEDING THE ABSOLUTE

If we contemplate the positive spirit in its relation to scientific conception rather than the mode of procedure, we shall find that this philosophy is distinguished from the theologico-metaphysical by its tendency to render relative the ideas which were at first absolute. This inevitable passage from the absolute to the relative is one of the most important philosophical results of each of the intellectual revolutions which has carried on every kind of speculation from the theological or metaphysical to the scientific state. In a scientific view this contrast between the relative and the absolute may be regarded as the most decisive manifestation of the antipathy between the modern philosophy and the ancient. All investigation into the nature of beings, and their first and final causes, must always be absolute; whereas the study of the laws of phenomena must be relative, since it supposes a continuous progress of speculation subject to the gradual improvement of observation, without the precise reality being ever fully disclosed: so that the relative character of scientific conceptions is inseparable from the true idea of natural laws, just as the chimerical inclination for absolute knowledge accompanies every use of theological fictions and metaphysical entities. Now it is obvious that the absolute spirit characterizes social speculation now wherever it exists, as the different schools are all agreed in looking for an immutable political type, which makes no allowance

for the regular modification of political conceptions according to the variable state of civilization. This absolute spirit, having prevailed through all social changes, and their corresponding philosophical divergences, is now so inherent in existing political science that it affords, amidst all its enormous evils, the only means of restraining individual eccentricities, and excluding the influx of arbitrarily variable opinions. Thus, such philosophers as have desired to emancipate themselves from this absolutism, without having risen to the conception of a positive social philosophy, have justly incurred the reproach of representing political ideas as uncertain and even arbitrary in their nature, because they have deprived them of whatever character of consistency they had without substituting any other. They have even cast a sort of discredit upon all philosophical enterprise in the direction of political science, which, losing its absolutism, seemed to lose its stability, and therefore its morality. A positive sociology, however, would put to flight all these natural though empirical fears; for all antecedent experience shows that in other departments of natural philosophy scientific ideas have not become arbitrary by becoming relative, but have, on the contrary, acquired a new consistence and stability by being implicated in a system of relations which is ever extending and strengthening, and more and more restraining all serious aberration. There is, therefore, no fear of falling into a dangerous skepticism by destroying the absolute spirit, if it is done in the natural course of passing on towards the positive state. Here, as elsewhere, it is characteristic of the positive philosophy to destroy no means of intellectual coördination without substituting one more effectual and more extended; and it is evident that this transition from the absolute to the relative offers the only existing means of attaining to political conceptions that can gradually secure a unanimous and permanent assent.¹

¹ It is in harmony with the positive spirit to begin by tracing the relation of cause and effect among the social phenomena of one's own time and place, leaving the task of finding principles of universal application, if there are any, for more advanced study, when historical investigation is brought to the aid of scientific analysis. — ED.

PRESUMPTUOUS CHARACTER OF THE EXISTING POLITICAL SPIRIT

The importance and soundness of these conditions are less conspicuous than they might be, on account of the too close connection which, in social science more than any other, still exists between theory and practice, in consequence of which all speculative and abstract appreciation, however supremely important, excites only a feeble interest and inadequate attention. To show how this confusion results from the imperfection of social science, as the most complex of all, we must look at the existing political spirit in relation to its general application, and not for the moment in relation to the science itself. In this view we see that the existing political spirit is marked by its disposition to exercise an illimitable action over the corresponding phenomena, as it was once supposed possible to do in other departments of philosophy. Men were long in learning that man's power of modifying phenomena can result only from his knowledge of their natural laws; and in the infancy of each science they believed themselves able to exert an unbounded influence over the phenomena of that science. As this happened precisely at the period when they had the least power over phenomena, from ignorance of their laws, they rested their confidence on expectations of aid from supernatural agents, or mysterious forces supposed to be inherent in all that they saw. The delusion was protracted and the growth of true science hindered in proportion by the increasing complexity of the descending sciences, as each order of phenomena exhibited less generality than the last and obscured the perception as to what the modifying power of man really is. Social phenomena are, of course, from their extreme complexity, the last to be freed from this pretension; but it is, therefore, only the more necessary to remember that the pretension existed with regard to all the rest, in their earliest stage, and to anticipate, therefore, that social science will, in its turn, be emancipated from the delusion. It still hangs about the class of intellectual and moral phenomena; but otherwise it is now confined to social subjects. There, amidst the dawning of a sounder philosophy, we see statesmen and politicians still supposing

that social phenomena can be modified at will, the human race having, in their view, no spontaneous impulsion, but being always ready to yield to any influence of the legislator, spiritual or temporal, provided he is invested with a sufficient authority. We see the theological polity, as before, more consistent than the metaphysical, explaining the monstrous disproportion between slight causes and vast effects by regarding the legislator as merely the organ of a supernatural and absolute power ; and again, we see the metaphysical school following the same course, merely substituting for Providence its unintelligible entities, and especially its grand entity, Nature, which comprehends all the rest, and is evidently only an abstract deterioration of the theological principle. Going further than the theological school in its disdain of the subjection of effects to causes, it escapes from difficulty by attributing observed events to chance, and sometimes, when that method is too obviously absurd, exaggerating ridiculously the influence of the individual mind upon the course of human affairs. The result is the same in both cases. It represents the social action of man to be indefinite and arbitrary, as was once thought in regard to biological, chemical, physical, and even astronomical phenomena, in the earlier stages of their respective sciences. It is easy to see that true political science would be unacceptable, because it must impose limits on political action, by dissipating forever the pretension of governing at will this class of phenomena, and withdrawing them from human or superhuman caprice. In close connection with the tendency to absolute conceptions, we must recognize in this delusion the chief intellectual cause of the social disturbance which now exists ; for the human race finds itself delivered over, without logical protection, to the ill-regulated experimentation of the various political schools, each one of which strives to set up, for all future time, its own immutable type of government. We have seen what are the chaotic results of such a strife, and we shall find that there is no chance of order and agreement but in subjecting social phenomena, like all others, to invariable natural laws, which shall, as a whole, prescribe for each period, with entire certainty, the limits and character of political action, — in other words, introducing into the study of social phenomena the same

positive spirit which has regenerated every other branch of human speculation. Such a procedure is the true scientific basis of human dignity, as the chief tendencies of man's nature thus acquire a solemn character of authority which must be always respected by rational legislation ; whereas the existing belief in the indefinite power of political combinations, which seems at first to exalt the importance of man, issues in attributing to him a sort of social automatism passively directed by some supremacy of either Providence or the human ruler. I have said enough to show that the central difficulty in the task of regenerating political science is to rectify such an error of conception, at a time when our prevailing intellectual habits render it difficult to seize social conceptions in any other than their practical aspect, and when their scientific and, yet more, their logical relations are obscured by the prepossessions of the general mind.

PREVISION OF SOCIAL PHENOMENA

The last of the preliminary considerations that we have to review is that of the scientific prevision of phenomena, which, as the test of true science, includes all the rest. We have to contemplate social phenomena as susceptible of prevision, like all other classes, within the limits of exactness compatible with their higher complexity. Comprehending the three characteristics of political science which we have been examining, prevision of social phenomena supposes, first, that we have abandoned the region of metaphysical idealities to assume the ground of observed realities by a systematic subordination of imagination to observation ; secondly, that political conceptions have ceased to be absolute, and have become relative to the variable state of civilization, so that theories, following the natural course of facts, may admit of our foreseeing them ; and, thirdly, that permanent political action is limited by determinate laws, since, if social events were always exposed to disturbance by the accidental intervention of the legislator, human or divine, no scientific prevision of them would be possible. Thus, we may concentrate the conditions of the spirit of positive social philosophy on this one great attribute of scientific

prevision. This concentration is all the more apt for the purpose of our inquiry, because there is no other view in which the new social philosophy is so clearly distinguished from the old. Events ordered by a supernatural will may leave room for a supposition of revelation ; but the very thought of prevision in that case is sacrilegious, and the case is essentially the same when the direction of events is assigned to metaphysical entities, except that it leaves the chance of revelation, the existence of which chance shows that the metaphysical conception is a mere modification of the theological. The old conceptions may evidently be applied to explain opposite facts equally well ; and they can never afford the slightest indication of those which are yet future. And, if it be objected that, at all times, a great number of secondary political facts have been considered susceptible of prevision, this only proves that the old philosophy has never been strictly universal, but has always been tempered by an admixture of feeble and imperfect positivism, without more or less of which society could not have held on its course. This admixture has, however, been hitherto insufficient to allow anything worthy the name of prevision, — anything more than a sort of popular forecast of some secondary and partial matters, — never rising above an uncertain and rough empiricism, which might be of some provisional use, but could not in any degree supply the need of a true political philosophy.

Having now ascertained the fundamental position of the problems of political philosophy, and thus obtained guidance as to the scientific aim to be attained, the next step is to exhibit the general spirit of social physics, whose conditions we have been deciding.

SPIRIT OF SOCIAL SCIENCE

The philosophical principle of the science being that social phenomena are subject to natural laws, admitting of rational prevision, we have to ascertain what is the precise subject and what the peculiar character of those laws. The distinction between the statical and dynamical conditions of the subject must be extended to social science ; and I shall treat of the conditions of

social existence, as in biology I treated of organization under the head of anatomy ; and then of the laws of social movement, as in biology of those of life under the head of physiology. This division, necessary for exploratory purposes, must not be stretched beyond that use ; and as we saw in biology that the distinction becomes weaker with the advance of science, so shall we see that when the science of social physics is fully constituted, this division will remain for analytical purposes, but not as a real separation of the science into two parts. The distinction is not between two classes of facts, but between two aspects of a theory. It corresponds with the double conception of order and progress ; for order consists (in a positive sense) in a permanent harmony among the conditions of social existence, and progress consists in social development ; and the conditions in the one case and the laws of movement in the other constitute the statics and dynamics of social physics.¹ And here we find again the constant relation between the science and the art,—the theory and the practice. A science which proposes a positive study of the laws of order and of progress cannot be regarded with speculative rashness by practical men of any intelligence, since it offers the only rational basis for the practical means of satisfying the needs of society as to order and progress ; and the correspondence in this case will be found to be analogous to that which we have seen to exist between biological science and the arts which relate to it,—the medical art especially. One view of the deepest interest in this connection is that the ideas of order and progress which are in perpetual conflict in existing society, occasioning infinite disturbance, are thus reconciled and made necessary to each other, becoming as truly inseparable as the ideas of organization and life in the individual being. The further we go in the study of the conditions of human society, the more clearly will the organizing and progressive spirit of the positive philosophy become manifest.

¹ The present tendency among students is to question the utility of a static study of society. Sociology is coming to be a study of activities and processes, of manifestations of social energy. Therefore the distinction between statical and dynamical sociology, while logically possible, is practically of little value.—ED.

STATICAL STUDY

The statical study of sociology consists in the investigation of laws of action and reaction of the different parts of the social system, apart, for the occasion, from the fundamental movement which is always gradually modifying them. In this view, sociological prevision, founded upon the exact general knowledge of those relations, acts by judging by each other the various statical indications of each mode of social existence in conformity with direct observation, just as is done daily in the case of anatomy. This view condemns the existing philosophical practice of contemplating social elements separately, as if they had an independent existence, and it leads us to regard them as in mutual relation and forming a whole, which compels us to treat them in combination. By this method not only are we furnished with the only possible basis for the study of social movement, but we are put in possession of an important aid to direct observation, since many social elements which cannot be investigated by immediate observation may be estimated by their scientific relation to others already known. When we have a scientific knowledge of the interior relation of the parts of any science or art, and again of the relation of the sciences to each other, and again of the relations of the arts to their respective sciences, the observation of certain portions of the scheme enables us to pronounce on the state of other portions with a true philosophical security. The case is the same when, instead of studying the collective social phenomena of a single nation, we include in the study those of contemporary nations whose reciprocal influence cannot be disputed, though it is much reduced in modern times, and, as in the instance of western Europe and eastern Asia, apparently almost effaced.

SOCIAL ORGANIZATION

The only essential case in which this fundamental relation is misconceived or neglected is that which is the most important of all, involving, as it does, social organization, properly so called. The theory of social organization is still conceived of

as absolute and isolated, independent altogether of the general analysis of the corresponding civilization, of which it can, in fact, constitute only one of the principal elements. This vice is chargeable in an almost equal degree upon the most opposite political schools, which agree in abstract discussions of political systems, without thinking of the coexisting state of civilization, and usually conclude with making their immutable political type coincide with an infantile state of human development. If we ascend to the philosophical source of this error, we shall find it, I think, in the great theological dogma of the fall of man.¹ This fundamental dogma, which reappears, in one form or another, in all religions, and which is supported in its intellectual influence by the natural propensity of men to admire the past, tends, directly and necessarily, to make the continuous deterioration of society coincide with the extension of civilization. We have noticed before how, when it passes from the theological into the metaphysical state, this dogma takes the form of the celebrated hypothesis of a chimerical state of nature superior to the social state, and the more remote, the further we advance in civilization. We cannot fail to perceive the extreme seriousness, in a political as well as a philosophical sense, of an error so completely incorporated with existing doctrines, and so deeply influencing, in an unconscious way, our collective social speculations, — the more disastrously, perhaps, for not being expressly maintained as a general principle. If it were so presented it must immediately give way before sound philosophical discussion, for it is in direct contradiction to many ideas in political philosophy which, without having attained any scientific consistency, are obtaining some intellectual ascendancy through the natural course of events or the expansion of the general mind. For instance, all enlightened political writers acknowledge more or less mutual relation between political institutions; and this is the first direct step towards the rational conception of the agreement of the special system of institutions with the total system of civilization

¹ This is only an attempt to explain the obvious lack of harmony between man and his environment. — ED.

POLITICAL AND SOCIAL CONCURRENCE

We now see the best thinkers admitting a constant mutual connection between the political and the civil power: which means, in scientific language, that preponderating social forces always end in assuming the direction of society. Such partial advances towards a right view — such fortunate feeling after the right path — must not, however, induce us to relax in our requirements of a true philosophical conception of that general social agreement which can alone constitute organization. Desultory indications, more literary than scientific, can never supply the place of a strict philosophical doctrine, as we may see from the fact that, from Aristotle downwards (and even from an earlier period), the greater number of philosophers have constantly reproduced the famous aphorism of the necessary subordination of laws to manners, without this germ of sound philosophy having had any effect on the general habit of regarding institutions as independent of the coexisting state of civilization, however strange it may seem that such a contradiction should live through twenty centuries. This is, however, the natural course with intellectual principles and philosophical opinions as well as with social manners and political institutions. When once they have obtained possession of men's minds, they live on, notwithstanding their admitted impotence and inconvenience, giving occasion to more and more serious inconsistencies, till the expansion of human reason originates new principles, of equivalent generality and superior rationality. We must not, therefore, take for more than their worth the desultory attempts that we see made in the right direction, but must insist on the principle which lies at the heart of every scheme of social organization, — the necessary participation of the collective political *régime* in the universal consensus of the social body.

The scientific principle of the relation between the political and the social condition is simply this: that there must always be a spontaneous harmony between the whole and the parts of the social system, the elements of which must inevitably be sooner or later combined in a mode entirely conformable to their

nature. It is evident that not only must political institutions and social manners on the one hand, and manners and ideas on the other, be always mutually connected, but, further, that this consolidated whole must be always connected, by its nature, with the corresponding state of the integral development of humanity, considered in all its aspects, of intellectual, moral, and physical activity; and the only object of any political system whatever, temporal or spiritual, is to regulate the spontaneous expansion so as to best direct it towards its determinate end. Even during revolutionary periods, when the harmony appears furthest from being duly realized, it still exists; for without it there would be a total dissolution of the social organism. During those exceptional seasons the political *régime* is still, in the long run, in conformity with the corresponding state of civilization, as the disturbances which are manifest in the one proceed from equivalent derangements in the other. It is observable that when the popular theory attributes to the legislator the permanent power of infringing the harmony we are speaking of, it supposes him to be armed with a sufficient authority. But every social power, whether called authority or anything else, is constituted by a corresponding assent, spontaneous or deliberate, explicit or implicit, of various individual wills, resolved, from certain preparatory convictions, to concur in a common action of which this power is first the organ and then the regulator. Thus authority is derived from concurrence, and not concurrence from authority (setting aside the necessary reaction), so that no great power can arise otherwise than from the strongly prevalent disposition of the society in which it exists; and when there is no strong preponderance, such powers as exist are weak accordingly; and the more extensive the society the more irresistible is the correspondence. On the other hand, there is no denying the influence which, by a necessary reaction, the political system as a whole exercises over the general system of civilization, and which is so often exhibited in the action, fortunate or disastrous, of institutions, measures, or purely political events, even upon the course of the sciences and arts, in all ages of society, and especially the earliest. We need not dwell on this, for no one

denies it. The common error, indeed, is to exaggerate it, so as to place the reaction before the primary action. It is evident, considering their scientific relation to each other, that both concur in creating that fundamental agreement of the social organism which I propose to set forth in a brief manner as the philosophical principle of statical sociology. We shall have to advert repeatedly to the subject of the general correspondence between the political *régime* and the contemporary state of civilization, in connection with the question of the necessary limits of political action, and in the chapter which I must devote to social statics; but I did not think fit to wait for these explanations before pointing out that the political system ought always to be regarded as relative. The relative point of view, substituted for the absolute tendency of the ordinary theories, certainly constitutes the chief scientific character of the positive philosophy in its political application. If, on the one hand, the conception of this connection between government and civilization presents all ideas of political good or evil as necessarily relative and variable (which is quite another thing than being arbitrary), on the other hand it provides a rational basis for a positive theory of the spontaneous order of human society, already vaguely perceived in regard to some minor relations, by that part of the metaphysical polity which we call political economy; for if the value of any political system can consist in nothing but its harmony with the corresponding social state, it follows that in the natural course of events, and in the absence of intervention, such a harmony must necessarily be established.

INTERCONNECTION OF THE SOCIAL ORGANISM

There are two principal considerations which induce me to insist on this elementary idea of the radical consensus proper to the social organism: (1) the extreme philosophical importance of this master thought of social statics, which must, from its nature, constitute the rational basis of any new political philosophy; (2) in an accessory way, that dynamical considerations of sociology must prevail throughout the rest of this

work, as being at present more interesting and therefore better understood ; and it is on that account the more necessary to characterize now the general spirit of social statics, which will henceforth be treated only in an indirect and implicit way. As all artificial and voluntary order is simply a prolongation of the natural and involuntary order to which all human society tends, every rational political institution must rest upon an exact preparatory analysis of corresponding spontaneous tendencies, which alone can furnish a sufficiently solid basis. In brief, it is our business to contemplate order that we may perfect it, and not to create it, which would be impossible. In a scientific view this master thought of universal social interconnection becomes the consequence and complement of a fundamental idea established, in our view of biology, as eminently proper to the study of living bodies ; not that this idea of interconnection is peculiar to that study ; it is necessarily common to all phenomena, but amidst immense differences in intensity and variety, and therefore in philosophical importance. It is, in fact, true that wherever there is any system whatever, a certain interconnection must exist. The purely mechanical phenomena of astronomy offer the first suggestion of it, for the perturbations of one planet may sensibly affect another through a modified gravitation ; but the relation becomes closer and more marked in proportion to the complexity and diminished generality of the phenomena, and thus it is in organic systems that we must look for the fullest mutual connection. Hitherto it had been merely an accessory idea, but then it became the basis of positive conceptions ; and it becomes more marked, the more compound are the organisms and the more complex the phenomena in question, — the animal interconnection being more complete than the vegetable, and the human more than the brute, the nervous system being the chief seat of the biological interconnection. The idea must therefore be scientifically preponderant in social physics, even more than in biology, where it is so decisively recognized by the best order of students. But the existing political philosophy supposes the absence of any such interconnection among the aspects of society, and it is this which has rendered it necessary for me now to

establish the point, leaving the illustration of it to a future portion of the volume. Its consideration is, in fact, as indispensable in assigning its encyclopedic rank to social science as we before saw it to be in instituting social physics a science at all.

It follows from this attribute that there can be no scientific study of society either in its conditions or its movements, if it is separated into portions and its divisions are studied apart. I have already remarked upon this in regard to what is called political economy. Materials may be furnished by the observation of different departments; and such observation may be necessary for that object, but it cannot be called science. The methodical division of studies which takes place in the simple inorganic sciences is thoroughly irrational in the recent and complex science of society, and can produce no results. The day may come when some sort of subdivision may be practicable and desirable, but it is impossible for us now to anticipate what the principle of distribution may be; for the principle itself must arise from the development of the science, and that development can take place no otherwise than by our formation of the science as a whole. The complete body will indicate for itself, at the right season, the particular points which need investigation, and then will be the time for such special study as may be required. By any other method of proceeding we shall only find ourselves encumbered with special discussions badly instituted, worse pursued, and accomplishing no other purpose than that of impeding the formation of real science. It is no easy matter to study social phenomena in the only right way, — viewing each element in the light of the whole system. It is no easy matter to exercise such vigilance that no one of the number of contemporary aspects shall be lost sight of, but it is the right and the only way, and we may perceive in it a clear suggestion that this lofty study should be reserved for the highest order of scientific minds, better prepared than others, by wise educational discipline, for sustained speculative efforts, aided by an habitual subordination of the passions to the reason. There is no need to draw out any lengthened comparison between this state of things as it should be and that which is; and no existing

degree of social disturbance can surprise us when we consider how intellectual anarchy is at the bottom of such disturbance, and see how anarchical our intellectual condition appears in the presence of the principle I have laid down.

ORDER OF STATICAL STUDY

Before we go on to the subject of social dynamics I will just remark that the prominent interconnection we have been considering prescribes a procedure in organic studies different from that which suits inorganic. The metaphysicians announce as an aphorism that we should always, in every kind of study, proceed from the simple to the compound; whereas it appears most rational to suppose that we should follow that or the reverse method, as may best suit our subject. There can be no absolute merit in the method enjoined, apart from its suitability. The rule should rather be (and there probably was a time when the two rules were one) that we must proceed from the more known to the less. Now in the inorganic sciences the elements are much better known to us than the whole which they constitute; so that in that case we must proceed from the simple to the compound. But the reverse method is necessary in the study of man and of society; man and society, as a whole, being better known to us, and more accessible subjects of study, than the parts which constitute them. In exploring the universe it is as a whole that it is inaccessible to us, whereas in investigating man or society our difficulty is in penetrating the details. We have seen in our survey of biology that the general idea of animal nature is more distinct to our minds than the simpler notion of vegetable nature, and that man is the biological unity; the idea of man being at once the most compound and the starting point of speculation in regard to vital existence. Thus if we compare the two halves of natural philosophy, we shall find that in the one case it is the last degree of composition, and in the other the last degree of simplicity, that is beyond the scope of our research. As for the rest, it may obviate some danger of idle discussions to say that the positive philosophy, subordinating

all fancies to reality, excludes logical controversies about the absolute value of this or that method, apart from its scientific application. The only ground of preference being the superior adaptation of any means to the proposed end, this philosophy may, without any inconsistency, change its order of proceeding when the one first tried is found to be inferior to its converse, — a discovery of which there is no fear in regard to the question we have now been examining.

DYNAMICAL STUDY

Passing on from statical to dynamical sociology, we will contemplate the philosophical conception which should govern our study of the movement of society. Part of this subject is already dispatched, because the explanations made in connection with statics have simplified the chief difficulties of the case; and social dynamics will be so prominent throughout the rest of this work that I may reduce within very small compass what I have to say now under that head.

Though the statical view of society is the basis of sociology, the dynamical view is not only the more interesting of the two but the more marked in its philosophical character, from its being more distinguished from biology by the master thought of continuous progress, or rather of the gradual development of humanity. If I were writing a methodical treatise on political philosophy, it would be necessary to offer a preliminary analysis of the individual impulsions which make up the progressive force of the human race, by referring them to that instinct which results from the concurrence of all our natural tendencies, and which urges man to develop the whole of his life, physical, moral, and intellectual, as far as his circumstances allow. But this view is admitted by all enlightened philosophers, so that I may proceed at once to consider the continuous succession of human development regarded in the whole race, as if humanity were one. For clearness we may take advantage of Condorcet's device of supposing a single nation to which we may refer all the consecutive social modifications actually witnessed among distinct

peoples. This rational fiction is nearer the reality than we are accustomed to suppose; for, in a political view, the true successors of such or such a people are certainly those who, taking up and carrying out their primitive endeavors, have prolonged their social progress, whatever may be the soil which they inhabit, or even the race from which they spring. In brief, it is political continuity which regulates sociological succession, though the having a common country must usually affect this continuity in a high degree. As a scientific artifice merely, however, I shall employ this hypothesis, and on the ground of its manifest utility.

SOCIAL CONTINUITY

The true general spirit of social dynamics, then, consists in conceiving of each of these consecutive social states as the necessary result of the preceding and the indispensable mover of the following, according to the axiom of Leibnitz, — *the present is big with the future*. In this view the object of science is to discover the laws which govern this continuity, and the aggregate of which determines the course of human development. In short, social dynamics studies the laws of succession, while social statics inquires into those of coexistence; so that the use of the first is to furnish the true theory of progress to political practice, while the second performs the same service in regard to order; and this suitability to the needs of modern society is a strong confirmation of the philosophical character of such a combination.

PRODUCED BY NATURAL LAWS

If the existence of sociological laws has been established in the more difficult and uncertain case of the statical condition, we may assume that they will not be questioned in the dynamical province. In all times and places the ordinary course of even our brief individual life has disclosed certain remarkable modifications which have occurred in various ways in the social state; and all the most ancient representations of human life bear unconscious and most interesting testimony to this, apart from

all systematic estimate of the fact. Now it is the slow, continuous accumulation of these successive changes which gradually constitutes the social movement whose steps are ordinarily marked by generations, as the most appreciable elementary variations are wrought by the constant renewal of adults. At a time when the average rapidity of this progression seems to all eyes to be remarkably accelerated, the reality of the movement cannot be disputed, even by those who most abhor it. The only question is about the constant subjection of these great dynamical phenomena to invariable natural laws, — a proposition about which there is no question to any one who takes his stand on positive philosophy. It is easy, however, to establish from any point of view that the successive modifications of society have always taken place in a determinate order, the rational explanation of which is already possible in so many cases that we may confidently hope to recognize it ultimately in all the rest. So remarkable is the steadiness of this order, moreover, that it exhibits an exact parallelism of development among distinct and independent populations, as we shall see when we come to the historical portion of this volume. Since, then, the existence of the social movement is unquestionable, on the one hand, and, on the other, the succession of social states is never arbitrary, we cannot but regard this continuous phenomenon as subject to natural laws as positive as those which govern all other phenomena, though more complex. There is, in fact, no intellectual alternative, and thus it is evident that it is on the ground of social science that the great conflict must soon terminate which has gone on for three centuries between the positive and the theologico-metaphysical spirit. Banished forever from all other classes of speculation, in principle at least, the old philosophies now prevail in social science alone; and it is from this domain that they have to be excluded, by the conception of the social movement being subject to invariable natural laws instead of to any will whatever.

Though the fundamental laws of social interconnection are especially verified in this condition of movement, and though there is a necessary unity in this phenomenon, it may be usefully

applied, for preparatory purposes, to the separate elementary aspects of human existence, — physical, moral, intellectual, and finally political, — their mutual relation being kept in view. Now in whichever of these ways we regard, as a whole, the movement of humanity from the earliest periods till now, we shall find that the various steps are connected in a determinate order, as we shall hereafter see when we investigate the laws of this succession. I need refer here only to the intellectual evolution, which is the most distinct and unquestionable of all, as it has been the least impeded and most advanced of any, and has therefore been usually taken for guidance. The chief part of this evolution, and that which has most influenced the general progression, is no doubt the development of the scientific spirit, from the primitive labors of such philosophers as Thales and Pythagoras to those of men like Lagrange and Bichat. Now no enlightened man can doubt that in this long succession of efforts and discoveries the human mind has pursued a determinate course, the exact preparatory knowledge of which might have allowed a cultivated reason to foresee the progress proper to each period. Though the historical considerations cited in my former volume were only incidental, any one may recognize in them numerous and indisputable examples of this necessary succession, more complex perhaps, but not more arbitrary, than any natural law, whether in regard to the development of each separate science or to the mutual influence of the different branches of natural philosophy. In accordance with the principles laid down at the beginning of this work, we have already seen in various signal instances that the chief progress of each period, and even of each generation, was a necessary result of the immediately preceding state; so that the men of genius, to whom such progression has been too exclusively attributed, are essentially only the proper organs of a predetermined movement, which would in their absence have found other issues. We find a verification of this in history, which shows that various eminent men were ready to make the same great discovery at the same time, while the discovery required only one organ. All the parts of the human evolution admit of analogous observations,

as we shall presently see, though they are more complex and less obvious than that which I have just cited. The natural progression of the arts of life is abundantly evident; and in our direct study of social dynamics we shall find an explanation of the apparent exception of the fine arts, which will be found to oppose no contradiction to the general course of human progression. As to that part of the movement which appears at present to be least reducible to natural laws, — the political movement (still supposed to be governed by wills of adequate power), — it is as clear as in any other case that political systems have exhibited an historical succession, according to a traceable filiation, in a determinate order, which I am prepared to show to be even more inevitable than that of the different states of human intelligence.

The interconnection which we have examined and established in a statical view may aid us in developing the conception of the existence of positive laws in social dynamics. Unless the movement was determined by those laws it would occasion the entire destruction of the social system. Now, that interconnection simplifies and strengthens the preparatory indications of dynamic order; for when it has once been shown in any relation we are authorized to extend it to all others, and this unites all the partial proofs that we can successively obtain of the reality of this scientific conception. In the choice and the application of these verifications we must remember that the laws of social dynamics are most recognizable when they relate to the largest societies, in which secondary disturbances have the smallest effect. Again, these fundamental laws become the more irresistible, and therefore the more appreciable, in proportion to the advancement of the civilization upon which they operate, because the social movement becomes more distinct and certain with every conquest over accidental influences. As for the philosophical coördination of these preparatory evidences, the combination of which is important to science, it is clear that the social evolution must be more inevitably subject to natural laws, the more compound are the phenomena, and the less perceptible, therefore, the irregularities which arise from individual influences. This shows how

inconsistent it is, for instance, to suppose the scientific movement to be subject to positive laws, while the political movement is regarded as arbitrary; for the latter, being more composite, must overrule individual disturbances, and be therefore more evidently predetermined than the former, in which individual genius must have more power. Any paradoxical appearance which this statement may exhibit will disappear in the course of further examination.

If I confined myself strictly to a scientific view, I might satisfy myself with proving the fact of social progression, without taking any notice of the question of human perfectibility; but so much time and effort are wasted in groundless speculation on that interesting question, argued as it is on the supposition that political events are arbitrarily determined, that it may be as well to notice it in passing, — and the more because it may serve as a natural transition to the estimate of the limits of political action.

NOTION OF HUMAN PERFECTIBILITY

We have nothing to do here with the metaphysical controversy about the absolute happiness of man at different stages of civilization. As the happiness of every man depends on the harmony between the development of his various faculties and the entire system of the circumstances which govern his life, and as, on the other hand, this equilibrium always establishes itself spontaneously to a certain extent, it is impossible to compare in a positive way, either by sentiment or reasoning, the individual welfare which belongs to social situations that can never be brought into direct comparison; and therefore the question of the happiness of different animal organisms, or of their two sexes, is merely impracticable and unintelligible. The only question, therefore, is of the effect of the social evolution, which is so undeniable that there is no reasoning with any one who does not admit it as the basis of the inquiry. The only ground of discussion is whether development and improvement, — the theoretical and the practical aspect, — are one; whether the development is necessarily accompanied by a corresponding

amelioration, or progress, properly so called. To me it appears that the amelioration is as unquestionable as the development from which it proceeds, provided we regard it as subject, like the development itself, to limits, general and special, which science will be found to prescribe. The chimerical notion of unlimited perfectibility is thus at once excluded. Taking the human race as a whole, and not any one people, it appears that human development brings after it, in two ways, an ever-growing amelioration, first in the radical condition of man, which no one disputes, and next in his corresponding faculties, which is a view much less attended to. There is no need to dwell upon the improvement in the conditions of human existence, both by the increasing action of man on his environment through the advancement of the sciences and arts, and by the constant amelioration of his customs and manners, and again by the gradual improvement in social organization. We shall presently see that in the Middle Ages, which are charged with political retrogression, the progress was more political than any other. One fact is enough to silence sophistical declamation on this subject,—the continuous increase of population all over the globe, as a consequence of civilization, while the wants of individuals are, as a whole, better satisfied at the same time. The tendency to improvement must be highly spontaneous and irresistible to have persevered notwithstanding the enormous faults,—political faults especially,—which have at all times absorbed or neutralized the greater part of our social forces. Even throughout the revolutionary period, in spite of the marked discordance between the political system and the general state of civilization, the improvement has proceeded not only in physical and intellectual but also in moral respects, though the transient disorganization could not but disturb the natural evolution. As for the other aspect of the question,—the gradual and slow improvement of human nature within narrow limits,—it seems to me impossible to reject altogether the principle proposed (with great exaggeration, however) by Lamarck, of the necessary influence of a homogeneous and continuous exercise in producing, in every animal organism and especially in man, an organic improvement

susceptible of being established in the race, after a sufficient persistence. If we take the best marked case, — that of intellectual development, — it seems to be unquestionable that there is a superior aptitude for mental combinations, independent of all culture, among highly civilized people; or, what comes to the same thing, an inferior aptitude among nations that are less advanced, — the average intellect of the members of those societies being taken for observation. The intellectual faculties are, it is true, more modified than the others by the social evolution; but then they have the smallest relative effect in the individual human constitution, so that we are authorized to infer from their amelioration a proportionate improvement in aptitudes that are more marked and equally exercised. In regard to morals particularly, I think it indisputable that the gradual development of humanity favors a growing preponderance of the noblest tendencies of our nature, as I hope to prove further on. The lower instincts continue to manifest themselves in modified action, but their less sustained and more repressed exercise must tend to debilitate them by degrees, and their increasing regulation certainly brings them into involuntary concurrence in the maintenance of a good social economy, and especially in the case of the least marked organisms, which constitute a vast majority. These two aspects of social evolution, then, — the *development* which brings after it the *improvement*, — we may consider to be admitted as facts.

Adhering to our relative in opposition to the absolute view, we must conclude the social state, regarded as a whole, to have been as perfect in each period as the coexisting condition of humanity and of its environment would allow. Without this view, history would be incomprehensible; and the relative view is as indispensable in regard to progress as, in considering social statics, we saw it to be in regard to order. If, in a statical view, the various social elements cannot but maintain a spontaneous harmony, which is the first principle of order, neither can any of them help being as advanced at any period as the whole system of influences permits. In either case the harmony and the movement are the result of invariable natural laws which

produce all phenomena whatever, and are more obscure in social science merely on account of the greater complexity of the phenomena concerned.

LIMITS OF POLITICAL ACTION

And now occurs, as the last aspect of social dynamics, the question of the general limits of political action. No enlightened man can be blind to the necessary existence of such limits, which can be ignored only on the old theological supposition of the legislator being merely the organ of a direct and continuous providence, which admits of no limits. We need not stop to confute that hypothesis, which has no existence but in virtue of ancient habits of thought. In any case human action is very limited in spite of all aids from concurrence and ingenious methods; and it is difficult to perceive why social action should be exempt from this restriction, which is an inevitable consequence of the existence of natural laws. Through all the self-assertions of human pride every statesman of experience knows well the reality of the bounds prescribed to political action by the aggregate of social influences, to which he must attribute the failure of the greater number of the projects which he had secretly cherished; and perhaps the conviction is most thorough, while most carefully hidden, in the mind of the most powerful of statesmen, because his inability to struggle against natural laws must be decisive in proportion to his implication with them. Seeing that social science would be impossible in the absence of this principle, we need not dwell further upon it, but may proceed to ascertain the fitness of the new political philosophy to determine, with all the precision that the subject admits, what is the nature of these limits, general or special, permanent or temporary.

Two questions are concerned here: first, in what way the course of human development may be affected by the aggregate of causes of variation which may be applied to it; and next, what share the voluntary and calculated action of our political combinations may have among these modifying influences. The

first question is by far the most important, both because it is a general principle, which the second is not, and because it is fully accessible, which again the second is not.

SOCIAL PHENOMENA, MODIFIABLE

We must observe, in the first place, that social phenomena may, from their complexity, be more easily modified than any others, according to the law which was established to that effect in my first volume. Thus, the limits of variation are wider in regard to sociological than to any other laws. If, then, human intervention holds the same proportionate rank among modifying influences as it is natural at first to suppose, its influence must be more considerable in the first case than in any other, all appearances to the contrary notwithstanding. This is the first scientific foundation of all rational hopes of a systematic reformation of humanity; and on this ground illusions of this sort certainly appear more excusable than on any other subject. But though modifications from all causes are greater in the case of political than of simpler phenomena, still they can never be more than modifications; that is, they will always be in subjection to those fundamental laws, whether statical or dynamical, which regulate the harmony of the social elements and the filiation of their successive variations. There is no disturbing influence, exterior or human, which can make incompatible elements co-exist in the political system, or change in any way the natural laws of the development of humanity. The inevitable gradual preponderance of continuous influences, however imperceptible their power may be at first, is now admitted with regard to all natural phenomena; and it must be applied to social phenomena whenever the same method of philosophizing is extended to them. What, then, are the modifications of which the social organism and the social life are susceptible, if nothing can alter the laws either of harmony or of succession? The answer is that modifications act upon the intensity and secondary operation of phenomena, but without affecting their nature or filiation. To suppose that they could, would be to exalt the disturbing above

the fundamental cause, and would destroy the whole economy of laws. In the political system this principle of positive philosophy shows that, in a statical view, any possible variations can affect only the intensity of the different tendencies belonging to each social situation, without in any way hindering or producing, or, in a word, changing the nature of those tendencies ; and in the same way, in a dynamical view, the progress of the race must be considered susceptible of modification only with regard to its speed, and without any reversal in the order of development, or any interval of any importance being overleaped. These variations are analogous to those in the animal organism, with the one difference that in sociology they are more complex ; and, as we saw that the limits of variation remain to be established in biology, it is not to be expected that sociology should be more advanced. But all we want here is to obtain a notion of the general spirit of the law in regard both to social statics and dynamics ; and looking at it from both points of view, it seems to me impossible to question its truth. In the intellectual order of phenomena, for instance, there is no accidental influence nor any individual superiority which can transfer to one period the discoveries reserved for a subsequent age, in the natural course of the human mind ; nor can there be the reverse case of postponement. The history of the sciences settles the question of the close dependence of even the most eminent individual genius on the contemporary state of the human mind ; and this is above all remarkable in regard to the improvement of methods of investigation, either in the way of reasoning or experiment. The same thing happens in regard to the arts ; and especially in whatever depends on mechanical means in substitution for human action. And there is not, in reality, any more room for doubt in the case of moral development, the character of which is certainly determined in each period by the corresponding state of the social evolution, whatever may be the modifications caused by education or individual organization. Each of the leading modes of social existence determines for itself a certain system of morals and manners, the common aspect of which is easily recognized in all individuals, in the midst of their characteristic differences ; for instance, there

is a state of human life in which the best individual natures contract a habit of ferocity, from which very inferior natures easily emancipate themselves in a better state of society. The case is the same in a political view, as our historical analysis will hereafter show. And in fact, if we were to review all the facts and reflections which establish the existence of the limits of variation, whose principle I have just laid down, we should find ourselves reproducing in succession all the proofs of the subjection of social phenomena to invariable laws; because the principle is neither more nor less than a strict application of the philosophical conception.

ORDER OF MODIFYING INFLUENCES

We cannot enlarge upon the second head, — that is, the classification of modifying influences according to their respective importance. If such a classification is not yet established in biology, it would be premature indeed to attempt it in social science. Thus, if the three chief causes of social variation appear to me to result first, from race; secondly, from climate; thirdly, from political action in its whole scientific extent, it would answer none of our present purposes to inquire here whether this or some other is the real order of their importance. The political influences are the only ones really open to our intervention; and to that head general attention must be directed, though with great care to avoid the conclusion that that class of influences must be the most important because it is the most immediately interesting to us. It is owing to such an illusion as this that observers who believe themselves emancipated from old prejudices cannot obtain sociological knowledge, because they enormously exaggerate the power of political action. Because political operations, temporal or spiritual, can have no social efficacy but in as far as they are in accordance with the corresponding tendencies of the human mind, they are supposed to have produced what is in reality occasioned by a spontaneous evolution, which is less conspicuous and easily overlooked. Such a mistake proceeds in neglect of numerous and marked cases in history, in which the most

prodigious political authority has left no lasting traces of its well-sustained development, because it moved in a contrary direction to modern civilization,—as in the instances of Julian, of Philip II, of Napoleon Bonaparte, etc. The inverse cases, unhappily too few, are still more decisive,—those cases in which political action, sustained by an equally powerful authority, has nevertheless failed in the pursuit of ameliorations that were premature, though in accordance with the social movement of the time. Intellectual history, as well as political, furnishes examples of this kind in abundance. It has been sensibly remarked by Fergusson that even the action of one nation upon another, whether by conquest or otherwise, though the most intense of all social forces, can effect merely such modifications as are in accordance with its existing tendencies; so that, in fact, the action merely accelerates or extends a development which would have taken place without it. In politics, as in science, *opportuneness* is always the main condition of all great and durable influence, whatever may be the personal value of the superior man to whom the multitude attribute social action of which he is merely the fortunate organ. The power of the individual over the race is subject to these general limits, even when the effects, for good or for evil, are as easy as possible to produce. In revolutionary times, for instance, those who are proud of having aroused anarchical passions in their contemporaries do not see that their miserable triumph is due to a spontaneous disposition, determined by the aggregate of the corresponding social state, which has produced a provisional and partial relaxation of the general harmony. As for the rest, it being ascertained that there are limits of variation among social phenomena, and modifications dependent on systematic political action, and as the scientific principle which is to describe such modifications is now known, the influence and scope of that principle must be determined in each case by the direct development of social science applied to the appreciation of the corresponding state of circumstances. It is by such estimates, empirically attempted, that men of genius have been guided in all great and profound action upon humanity in any way whatever; and it is only thus that they have been able to rectify in a rough

way the illusory suggestions of the irrational doctrines in which they were educated. Everywhere, as I have so often said, foresight is the true source of action.

The inaccurate intellectual habits which as yet prevail in political philosophy may induce an apprehension that, according to such considerations as those just presented, the new science of social physics may reduce us to mere observation of human events, excluding all continuous intervention. It is, however, certain that, while dissipating all ambitious illusions about the indefinite action of man on civilization, the principle of rational limits to political action establishes, in the most exact and unquestionable manner, the true point of contact between social theory and practice. It is by this principle only that political art can assume a systematic character, by its release from arbitrary principles mingled with empirical notions. It is thus only that political art can pass upwards as medical art has done, the two cases being strongly analogous. As political intervention can have no efficacy unless it rests on corresponding tendencies of the political organism or life, so as to aid its spontaneous development, it is absolutely necessary to understand the natural laws of harmony and succession which determine, in every period and under every social aspect, what the human evolution is prepared to produce, pointing out at the same time the chief obstacles which may be got rid of. It would be exaggerating the scope of such an art to suppose it capable of obviating in all cases the violent disturbances which are occasioned by impediments to the natural evolution. In the highly complex social organism maladies and crises are necessarily even more inevitable than in the individual organism. But though science is powerless for the moment amidst wild disorder and extravagance, it may palliate and abridge the crises by understanding their character and foreseeing their issue, and by more or less intervention, where any is possible. Here, as in other cases, and more than in other cases, the office of science is not to govern but to modify phenomena,—and to do this it is necessary to understand their laws.

Thus, then, we see what is the function of social science. Without extolling or condemning political facts, science regards

them as subjects of observation ; it contemplates each phenomenon in its harmony with coexisting phenomena and in its connection with the foregoing and the following state of human development ; it endeavors to discover, from both points of view, the general relations which connect all social phenomena ; and each of them is *explained*, in the scientific sense of the word, when it has been connected with the whole of the existing situation and the whole of the preceding movement. Favoring the social sentiment in the highest degree, this science fulfills the famous suggestion of Pascal by representing the whole human race, past, present, and future, as constituting a vast and eternal social unit whose different organs, individual and national, concur, in their various modes and degrees, in the evolution of humanity. Leading us on, like every other science, with as much exactness as the extreme complexity of its phenomena allows, to a systematic prevision of the events which must result from either a given situation or a given aggregate of antecedents, political science enlightens political art not only in regard to the tendencies which should be aided but also as to the chief means that should be employed, so as to avoid all useless or ephemeral and therefore dangerous action ; in short, all waste of any kind of social force.

MEANS OF INVESTIGATION

This examination of the general spirit of political philosophy has been much more difficult than the same process in regard to any established science. The next step, now that this is accomplished, is to examine, according to my usual method, the means of investigation proper to social science. In virtue of a law before recognized, we may expect to find in sociology a more varied and developed system of resources than in any other science, in proportion to the complexity of the phenomena, while yet this extension of means does not compensate for the increased imperfection arising from the intricacy. The extension of the means is also more difficult to verify than in any prior case, from the novelty of the subject ; and I can scarcely hope that such a sketch as I must present here will command such confidence as

will arise when a complete survey of the science shall have confirmed what I now offer.

As social physics assumes a place in the hierarchy of sciences after all the rest, and therefore dependent on them, its means of investigation must be of two kinds, — those which are peculiar to itself, and which may be called direct, and those which arise from the connection of sociology with the other sciences; and these last, though indirect, are as indispensable as the first. I shall review, first, the direct resources of the science.

Here, as in all other cases, there are three methods of proceeding, — by observation, experiment, and comparison.

OBSERVATION

Very imperfect and even vicious notions prevail at present as to what observation can be and can effect in social science. The chaotic state of doctrine of the last century has extended to method, and amidst our intellectual disorganization difficulties have been magnified; precautionary methods, experimental and rational, have been broken up; and even the possibility of obtaining social knowledge by observation has been dogmatically denied; but if the sophisms put forth on this subject were true, they would destroy the certainty not only of social science but of all the simpler and more perfect sciences that have gone before. The ground of doubt assigned is the uncertainty of human testimony; but all the sciences, up to the most simple, require proofs of testimony, — that is, in the elaboration of the most positive theories we have to admit observations which could not be directly made, nor even repeated, by those who use them, and the reality of which rests on the only faithful testimony of the original investigators, there being nothing in this to prevent the use of such proofs in concurrence with immediate observations. In astronomy such a method is obviously necessary; it is equally though less obviously necessary even in mathematics, and, of course, much more evidently so in the case of the more complex sciences. How could any science emerge from the nascent state, — how could there be any organization of intellectual labor,

even if research were restricted to the utmost, if every one rejected all observations but his own? The stoutest advocates of historical skepticism do not go so far as to advocate this. It is only in the case of social phenomena that the paradox is proposed; and it is made use of there because it is one of the weapons of the philosophical arsenal which the revolutionary metaphysical doctrine constructed for the intellectual overthrow of the ancient political system. The next great hindrance to the use of observation is the empiricism which is introduced into it by those who, in the name of impartiality, would interdict the use of any theory whatever. No logical dogma could be more thoroughly irreconcilable with the spirit of positive philosophy, or with its special character in regard to the study of social phenomena, than this. No real observation of any kind of phenomena is possible, except in as far as it is first directed and finally interpreted by some theory; and it was this logical need which, in the infancy of human reason, occasioned the rise of theological philosophy, as we shall see in the course of our historical survey. The positive philosophy does not dissolve this obligation, but, on the contrary, extends and fulfills it more and more the further the relations of phenomena are multiplied and perfected by it. Hence it is clear that, scientifically speaking, all isolated, empirical observation is idle, and even radically uncertain; that science can use only those observations which are connected, at least hypothetically with some law; that it is such a connection which makes the chief difference between scientific and popular observation, embracing the same facts but contemplating them from different points of view; and that observations empirically conducted can at most supply provisional materials, which must usually undergo an ulterior revision. The rational method of observation becomes more necessary in proportion to the complexity of the phenomena, amidst which the observer would not know what he ought to look at in the facts before his eyes, but for the guidance of a preparatory theory; and thus it is that by the connection of foregoing facts we learn to see the facts that follow. This is undisputed with regard to astronomical, physical, and chemical research, and in every branch of biological study in which good

observation of its highly complex phenomena is still very rare, precisely because its positive theories are very imperfect. Carrying on the analogy, it is evident that in the corresponding divisions, statical and dynamical, of social science there is more need than anywhere else of theories which shall scientifically connect the facts that are happening with those that have happened; and the more we reflect, the more distinctly we shall see that in proportion as known facts are mutually connected we shall be better able not only to estimate but to perceive those which are yet unexplored. I am not blind to the vast difficulty which this requisition imposes on the institution of positive sociology, — obliging us to create at once, so to speak, observations and laws, placing us, on account of their indispensable connection, in a sort of vicious circle from which we can issue only by employing in the first instance materials which are badly elaborated and doctrines which are ill-conceived. How I may succeed in a task so difficult and delicate we shall see at its close; but, however that may be, it is clear that it is the absence of any positive theory which at present renders social observations so vague and incoherent. There can never be any lack of facts; for in this case, even more than in others, it is the commonest sort of facts that are most important, whatever the collectors of secret anecdotes may think; but, though we are steeped to the lips in them, we can make no use of them, nor even be aware of them, for want of speculative guidance in examining them. The statical observation of a crowd of phenomena cannot take place without some notion, however elementary, of the laws of social interconnection; and dynamical facts could have no fixed direction if they were not attached, at least by a provisional hypothesis, to the laws of social development. The positive philosophy is very far from discouraging historical or any other erudition; but the precious night watchings, now so lost in the laborious acquisition of a conscientious but barren learning, may be made available by it for the constitution of true social science and the increased honor of the earnest minds that are devoted to it. The new philosophy will supply fresh and nobler subjects, un hoped-for insight, a loftier aim, and therefore a higher scientific dignity.

It will discard none but aimless labors, without principle and without character, as in physics there is no room for compilations of empirical observations ; and at the same time philosophy will render justice to the zeal of students of a past generation, who, destitute of the favorable guidance which we of this day enjoy, followed up their laborious historical researches with an instinctive perseverance, and in spite of the superficial disdain of the philosophers of the time. No doubt the same danger attends research here as elsewhere, — the danger that, from the continuous use of scientific theories, the observer may sometimes pervert facts by erroneously supposing them to verify some ill-grounded speculative prejudices of his own. But we have the same guard here as elsewhere, — in the further extension of the science ; and the case would not be improved by a recurrence to empirical methods, which would be merely leaving theories that may be misapplied, but can always be rectified, for imaginary notions which cannot be substantiated at all. Our feeble reason may often fail in the application of positive theories, but at least these transfer us from the domain of imagination to that of reality, and expose us infinitely less than any other kind of doctrine to the danger of seeing in facts that which is not.

It is now clear that social science requires, more than any other, the subordination of observation to the statical and dynamical laws of phenomena. No social fact can have any scientific meaning till it is connected with some other social fact, without which connection it remains a mere anecdote, involving no rational utility. This condition so far increases the immediate difficulty that good observers will be rare at first, though more abundant than ever as the science expands ; and here we meet with another confirmation of what I said at the outset of this volume, — that the formation of social theories should be confined only to the best organized minds, prepared by the most rational training. Explored by such minds, according to rational views of coexistence and succession, social phenomena no doubt admit of much more varied and extensive means of investigation than phenomena of less complexity. In this view it is not only the immediate inspection or direct description of events that

affords useful means of positive exploration, but the consideration of apparently insignificant customs, the appreciation of various kinds of monuments, the analysis and comparison of languages, and a multitude of other resources. In short, a mind suitably trained becomes able by exercise to convert almost all impressions from the events of life into sociological indications, when once the connection of all indications with the leading ideas of the science is understood. This is a facility afforded by the mutual relation of the various aspects of society, which may partly compensate for the difficulty caused by that mutual connection; if it renders observation more difficult, it affords more means for its prosecution.

EXPERIMENT

It might be supposed beforehand that the second method of investigation, experiment, must be wholly inapplicable to social science; but we shall find that the science is not entirely deprived of this resource, though it must be one of inferior value. We must remember (what was before explained) that there are two kinds of experimentation,—the direct and the indirect,—and that it is not necessary to the philosophical character of this method that the circumstances of the phenomenon in question should be, as is vulgarly supposed in the learned world, artificially instituted. Whether the case be natural or factitious, experimentation takes place whenever the regular course of the phenomenon is interfered with in any determinate manner. The spontaneous nature of the alteration has no effect on the scientific value of the case, if the elements are known. It is in this sense that experimentation is possible in sociology. If direct experimentation has become too difficult amidst the complexities of biology, it may well be considered impossible in social science. Any artificial disturbance of any social element must affect all the rest, according to the laws both of coexistence and succession; and the experiment would therefore, if it could be instituted at all, be deprived of all scientific value, through the impossibility of isolating either the conditions or the results of the phenomenon. But we saw in our survey of biology that pathological cases are the true scientific

equivalent of pure experimentation, and why. The same reasons apply, with even more force, to sociological researches. In them pathological analysis consists in the examination of cases, unhappily too common, in which the natural laws, either of harmony or of succession, are disturbed by any causes, special or general, accidental or transient, as in revolutionary times especially, and above all, in our own. These disturbances are, in the social body, exactly analogous to diseases in the individual organism; and I have no doubt whatever that the analogy will be more evident (allowance being made for the unequal complexity of the organisms) the deeper the investigation goes. In both cases it is, as I said once before, a noble use to make of our reason, to disclose the real laws of our nature, individual or social, by the analysis of its sufferings. But if the method is imperfectly instituted in regard to biological questions, much more faulty must it be in regard to the phenomena of social science, for want even of the rational conceptions to which they are to be referred. We see the most disastrous political experiments forever renewed, with only some insignificant and irrational modifications, though their first operation should have fully satisfied us of the uselessness and danger of the expedients proposed. Without forgetting how much is ascribable to the influence of human passions, we must remember that the deficiency of an authoritative rational analysis is one of the main causes of the barrenness imputed to social experiments, the course of which would become much more instructive if it were better observed. The great natural laws exist and act in all conditions of the organism; for, as we saw in the case of biology, it is an error to suppose that they are violated or suspended in the case of disease; and we are therefore justified in drawing our conclusions, with due caution, from the scientific analysis of disturbance to the positive theory of normal existence. This is the nature and character of the indirect experimentation which discloses the real economy of the social body in a more marked manner than simple observation could do. It is applicable to all orders of sociological research, whether relating to existence or to movement, and regarded under any aspect whatever, — physical, intellectual, moral, or political; and to all degrees

of the social evolution, from which, unhappily, disturbances have never been absent. As for its present extension, no one can venture to offer any statement of it, because it has never been duly applied in any investigation in political philosophy ; and it can become customary only by the institution of the new science which I am endeavoring to establish ; but I could not omit this notice of it as one of the means of investigation proper to social science.

COMPARISON

As for the third of those methods, comparison, the reader must bear in mind the explanations offered, in our survey of biological philosophy, of the reasons why the comparative method must prevail in all studies of which the living organism is the subject ; and the more remarkably, in proportion to the rank of the organism. The same considerations apply in the present case, in a more conspicuous degree ; and I may leave it to the reader to make the application, merely pointing out the chief differences which distinguish the use of the comparative method in sociological inquiries.

Comparison with Inferior Animals

It is a very irrational disdain which makes us object to all comparison between human society and the social state of the lower animals. This unphilosophical pride arose out of the protracted influence of the theologico-metaphysical philosophy ; and it will be corrected by the positive philosophy, when we better understand and can estimate the social state of the higher orders of mammals, for instance. We have seen how important is the study of individual life in regard to intellectual and moral phenomena, of which social phenomena are the natural result and complement. There was once the same blindness to the importance of the procedure in this case as now exists in the other ; and, as it has given way in the one case, so it will in the other. The chief defect in the kind of sociological comparison that we want is that it is limited to statical considerations ; whereas the dynamical are, at the present time, the preponderant and direct

subject of science. The restriction results from the social state of animals being, though not so stationary as we are apt to suppose, yet susceptible only of extremely small variations, in no way comparable to the continued progression of humanity in its feeblest days. But there is no doubt of the scientific utility of such a comparison, in the statical province, where it characterizes the elementary laws of social interconnection by exhibiting their action in the most imperfect state of society, so as even to suggest useful inductions in regard to human society. There cannot be a stronger evidence of the natural character of the chief social relations, which some people fancy that they can transform at pleasure. Such sophists will cease to regard the great ties of the human family as factitious and arbitrary when they find them existing, with the same essential characteristics, among the animals, and more conspicuously the nearer the organisms approach to the human type. In brief, in all that part of sociology which is almost one with intellectual and moral biology, or with the natural history of man, in all that relates to the first germs of the social relations and the first institutions which were founded by the unity of the family or the tribe, there is not only great scientific advantage but real philosophical necessity for employing the rational comparison of human with other animal societies. Perhaps it might even be desirable not to confine the comparison to societies which present a character of voluntary coöperation in analogy to the human. They must always rank first in importance ; but the scientific spirit, extending the process to its final logical term, might find some advantage in examining those strange associations proper to the inferior animals, in which an involuntary coöperation results from an indissoluble organic union, either by simple adhesion or real continuity. If the science gained nothing by this extension, the method would. And there is nothing that can compare with such an habitual scientific comparison for the great service of casting out the absolute spirit which is the chief vice of political philosophy. It appears to me, moreover, that, in a practical view, the insolent pride which induces some ranks of society to suppose themselves as, in a manner, of another species than the rest

of mankind is in close affinity with the irrational disdain that repudiates all comparison between human and other animal nature. However all this may be, these considerations apply only to a methodical and special treatment of social philosophy. Here, where I can offer only the first conception of the science, in which dynamical considerations must prevail, it is evident that I can make little use of the kind of comparison; and this makes it all the more necessary to point it out, lest its omission should occasion such scientific inconveniences as I have just indicated. The commonest logical procedures are generally so characterized by their very application that nothing more of a preliminary nature is needed than the simplest examination of their fundamental properties.

Comparison of Coexisting States of Society

To indicate the order of importance of the forms of society which are to be studied by the comparative method, I begin with the chief method, which consists in a comparison of the different coexisting states of human society on the various parts of the earth's surface, — those states being completely independent of each other. By this method the different stages of evolution may all be observed at once. Though the progression is single and uniform in regard to the whole race, some very considerable and very various populations have, from causes which are little understood, attained extremely unequal degrees of development, so that the former states of the most civilized nations are now to be seen, amidst some partial differences, among contemporary populations inhabiting different parts of the globe. In its relation to observation this kind of comparison offers the advantage of being applicable both to statical and dynamical inquiries, verifying the laws of both, and even furnishing occasionally valuable direct inductions in regard to both. In the second place, it exhibits all possible degrees of social evolution to our immediate observation. From the wretched inhabitants of Tierra del Fuego to the most advanced nations of western Europe, there is no social grade which is not extant in some points of the globe, and usually in localities which are

clearly apart. In the historical part of this volume we shall find that some interesting secondary phases of social development, of which the history of civilization leaves no perceptible traces, can be known only by this comparative method of study; and these are not, as might be supposed, the lowest degrees of evolution, which every one admits can be investigated in no other way. And between the great historical aspects there are numerous intermediate states which must be observed thus, if at all. This second part of the comparative method verifies the indications afforded by historical analysis, and fills up the gaps it leaves; and nothing can be more rational than this method, as it rests upon the established principle that the development of the human mind is uniform in the midst of all diversities of climate, and even of race, such diversities having no effect upon anything more than the rate of progress. But we must beware of the scientific dangers attending the process of comparison by this method. For instance, it can give us no idea of the order of succession, as it presents all the states of development as coexisting; so that, if the order of development were not established by other methods, this one would infallibly mislead us. And again, if we were not misled as to the order, there is nothing in this method which discloses the filiation of the different systems of society,—a matter in which the most distinguished philosophers have been mistaken in various ways and degrees. Again, there is the danger of mistaking modifications for primary phases, as when social differences have been ascribed to the political influence of climate, instead of to that inequality of evolution which is the real cause. Sometimes, but more rarely, the mistake is the other way. Indeed, there is nothing in the matter that can show which of two cases presents the diversity that is observed. We are in danger of the same mistake in regard to races; for, as the sociological comparison is instituted between peoples of different races, we are liable to confound the effects of race and of the social period. Again, climate comes in to offer a third source of interpretation of comparative phenomena, sometimes agreeing with and sometimes contradicting the two others, thus multiplying the chances of error and rendering the analysis which looked so promising

almost impracticable. Here, again, we see the indispensable necessity of keeping in view the positive conception of human development as a whole. By this alone can we be preserved from such errors as I have referred to, and enriched by any genuine results of analysis. We see how absurd in theory and dangerous in practice are the notions and declamations of the empirical school, and of the enemies of all social speculation; for it is precisely in proportion to their elevation and generality that the ideas of positive social philosophy become real and effective, — all illusion and uselessness belonging to conceptions which are too narrow and too special, in the departments either of science or of reasoning. But it is a consequence from these last considerations that this first sketch of sociological science, with the means of investigation that belong to it, rests immediately upon the primary use of a new method of observation, which is so appropriate to the nature of the phenomena as to be exempt from the dangers inherent in the others. This last portion of the comparative method is the historical method, properly so called, and it is the only basis on which the system of political logic can rest.

Comparison of Consecutive States

The historical comparison of the consecutive states of humanity is not only the chief scientific device of the new political philosophy. Its rational development constitutes the substratum of the science, in whatever is essential to it. It is this which distinguishes it thoroughly from biological science, as we shall presently see. The positive principle of this separation results from the necessary influence of human generations upon the generations that follow, accumulating continuously till it constitutes the preponderating consideration in the direct study of social development. As long as this preponderance is not directly recognized, the positive study of humanity must appear a simple prolongation of the natural history of man; but this scientific character, suitable enough to the earlier generations, disappears in the course of the social evolution, and assumes at length a wholly new aspect, proper to sociological science, in

which historical considerations are of immediate importance. And this preponderant use of the historical method gives its philosophical character to sociology in a logical as well as a scientific sense. By the creation of this new department of the comparative method sociology confers a benefit on the whole of natural philosophy, because the positive method is thus completed and perfected in a manner which, for scientific importance, is almost beyond our estimate. What we can now comprehend is that the historical method verifies and applies, in the largest way, that chief quality of sociological science, — its proceeding from the whole to the parts. Without this permanent condition of social study all historical labor would degenerate into a mere compilation of provisional materials. As it is in their development especially that the various social elements are interconnected and inseparable, it is clear that any partial filiation must be essentially untrue. Where, for instance, is the use of any exclusive history of any one science or art, unless meaning is given to it by first connecting it with the study of human progress generally? It is the same in every direction, and especially with regard to political history, as it is called, — as if any history could be other than political, more or less! The prevailing tendency to speciality in study would reduce history to a mere accumulation of unconnected delineations, in which all idea of the true filiation of events would be lost amidst the mass of confused descriptions. If the historical comparisons of the different periods of civilization are to have any scientific character, they must be referred to the general social evolution; and it is only thus that we can obtain the guiding ideas by which the special studies themselves must be directed.

In a practical view it is evident that the preponderance of the historical method tends to develop the social sentiment by giving us an immediate interest in even the earliest experiences of our race, through the influence which they exercised over the evolution of our own civilization. As Condorcet observed, no enlightened man can think of the battles of Marathon and Salamis without perceiving the importance of their consequences to the race at large. This kind of feeling should, when we are

treating of science, be carefully distinguished from the sympathetic interest which is awakened by all delineations of human life, in fiction as well as in history. The sentiment I refer to is deeper, because in some sort personal; and more reflective, because it results from scientific conviction. It cannot be excited by popular history in a descriptive form, but only by positive history, regarded as a true science, and exhibiting the events of human experience in coördinated series which manifest their own graduated connection. This new form of the social sentiment must at first be the privilege of the choice few; but it will be extended, somewhat weakened in force, to the whole of society, in proportion as the general results of social physics become sufficiently popular. It will fulfill the most obvious and elementary idea of the habitual connection between individuals and contemporary nations, by showing that the successive generations of men concur in a final end, which requires the determinate participation of each and all. This rational disposition to regard men of all times as fellow-workers is as yet visible in the case of only the most advanced sciences. By the philosophical preponderance of the historical method it will be extended to all the aspects of human life, so as to sustain, in a reflective temper, that respect for our ancestors which is indispensable to a sound state of society, and which is so deeply disturbed at present by the metaphysical philosophy.

As for the course to be pursued by this method, it appears to me that its spirit consists in the rational use of social series; that is, in a successive estimate of the different states of humanity, which shall show the growth of each disposition, — physical, intellectual, moral, or political, — combined with the decline of the opposite disposition, whence we may obtain a scientific prevision of the final ascendancy of the one and extinction of the other, care being taken to frame our conclusions according to the laws of human development. A considerable accuracy of prevision may thus be obtained for any determinate period and with any particular view, as historical analysis will indicate the direction of modifications even in the most disturbed times. And it is worth noticing that the prevision will be nearest the truth in

proportion as the phenomena in question are more important and more general ; because then continuous causes are predominant in the social movement, and disturbances have less power. From these first general aspects the same rational certainty may extend to secondary and special aspects, through their statical relations with the first ; and thus we may obtain conclusions sufficiently accurate for the application of principles.

If we desire to familiarize ourselves with this historical method, we must employ it first upon the past, by endeavoring to deduce every well-known historical situation from the whole series of its antecedents. In every science we must have learned to predict the past, so to speak, before we can predict the future ; because the first use of the observed relations among fulfilled facts is to teach us by the anterior succession what the future succession will be. No examination of facts can explain our existing state to us, if we have not ascertained, by historical study, the value of the elements at work ; and thus it is in vain that statesmen insist on the necessity of political observation, while they look no further than the present, or a very recent past. The present is, by itself, purely misleading, because it is impossible to avoid confounding principal with secondary facts, exalting conspicuous transient manifestations over fundamental tendencies, which are generally very quiet, and above all, supposing those powers, institutions, and doctrines to be in the ascendant, which are, in fact, in their decline. It is clear that the only adequate corrective of all this is a philosophical understanding of the past, that the comparison cannot be decisive unless it embraces the whole of the past, and that the sooner we stop, in traveling up the vista of time, the more serious will be our mistakes. We see statesmen going no further back than the last century to obtain an explanation of the confusion in which we are living ; the most abstract of politicians may take in the preceding century, but the philosophers themselves hardly venture beyond the sixteenth, so that those who are striving to find the issue of the revolutionary period have actually no conception of it as a whole, though that whole is itself only a transient phase of the general social movement.

The most perfect methods may, however, be rendered deceptive by misuse; and this we must bear in mind. We have seen that mathematical analysis itself may betray us into substituting signs for ideas, and that it conceals inanity of conception under an imposing verbiage. The difficulty in the case of the historical method in sociology is in applying it, on account of the extreme complexity of the materials we have to deal with; but for this the method would be entirely safe. The chief danger is of our supposing a continuous decrease to indicate a final extinction, or the reverse; as in mathematics it is a common sophism to confound continuous variations, more or less, with unlimited variations. To take a strange and very marked example: if we consider that part of social development which relates to human food, we cannot but observe that men take less food as they advance in civilization. If we compare savage with more civilized peoples, in the Homeric poems or in the narratives of travelers, or compare country to town life, or any generation with the one that went before, we shall find this curious result, the sociological law of which we shall examine hereafter. The laws of individual human nature aid in the result by making intellectual and moral action more preponderant as man becomes more civilized. The fact is thus established both by the experimental and the logical way; yet nobody supposes that men will ultimately cease to eat. In this case the absurdity saves us from a false conclusion, but in other cases the complexity disguises much error in the experiment and the reasoning. In the above instance we must resort to the laws of our nature for that verification which, taken all together, they afford to our sociological analysis. As the social phenomenon, taken as a whole, is simply a development of humanity, without any real creation of faculties, all social manifestations must be found, if only in their germ, in the primitive type which biology constructed by anticipation for sociology. Thus every law of social succession disclosed by the historical method must be unquestionably connected, directly or indirectly, with the positive theory of human nature; and all inductions which cannot stand this test will prove to be illusory, through some sort of insufficiency in the observations on which

they are grounded. The main scientific strength of sociological demonstrations must ever lie in the accordance between the conclusions of historical analysis and the preparatory conceptions of the biological theory. And thus we find, look where we will, a confirmation of that chief intellectual character of the new science, — the philosophical preponderance of the spirit of the whole over the spirit of detail.

This method ranks, in sociological science, with that of zoölogical comparison in the study of individual life ; and we shall see, as we proceed, that the succession of social states exactly corresponds, in a scientific sense, with the gradation of organisms in biology ; and the social series, once clearly established, must be as real and as useful as the animal series.

PROMISE OF A FOURTH METHOD

When the method has been used long enough to disclose its properties, I am disposed to think that it will be regarded as so very marked a modification of positive research as to deserve a separate place ; so that, in addition to observation properly so called, experiment, and comparison, we shall have the historical method as a fourth and final mode of the art of observing. It will be derived, according to the usual course, from the mode which immediately precedes it ; and it will be applied to the analysis of the most complex phenomena.

I must be allowed to point out that the new political philosophy, sanctioning the old leadings of popular reason, restores to history all its scientific rights as a basis of wise social speculation, after the metaphysical philosophy had striven to induce us to discard all large considerations of the past. In the foregoing departments of natural philosophy we have seen that the positive spirit, instead of being disturbing in its tendencies, is remarkable for confirming, in the essential parts of every science, the inestimable intuitions of popular good sense, of which indeed science is merely a systematic prolongation, and which a barren metaphysical philosophy alone could despise. In this case, so far from restricting the influence which human reason has ever attributed to history in

political combinations, the new social philosophy increases it radically and eminently. It asks from history something more than counsel and instruction to perfect conceptions which are derived from another source; it seeks its own general direction through the whole system of historical conclusions.¹

¹ The analysis of the familiar facts of everyday life deserves a place as a fifth method. It has probably been carried further by the Austrian school of economists in their development of the theory of value than by any other group of students in the general field of the social sciences. This method seeks to find in human nature itself the motives which produce social and economic activities, and to discover how these motives counteract and balance one another. So fruitful has been this method in economics that the student of sociology must look forward with confidence to its application to many of the wider problems of sociology and politics. No one can understand, to take a single example, the territorial expansion of the United States since the Spanish War who does not make a minute analysis of the motives and appetites of the people. Paradoxical as it may seem, this movement must be studied as a form of consumption of wealth, as the gratification of an appetite. It is therefore useless to point out that it is an expensive policy. It is also expensive to build fine houses, keep steam yachts or horses and carriages, or to own shooting boxes in the Adirondacks. If we conclude that the satisfaction derived from any of these forms of private consumption is worth the expense, that is sufficient. Similarly, if the people conclude that the satisfaction derived from such forms of public consumption as magnificent public buildings, large navies, or distant territorial possessions, is worth all the expense, they are not likely to be deterred by financial considerations. — ED.

III

RELATION OF SOCIOLOGY TO THE OTHER DEPARTMENTS OF POSITIVE PHILOSOPHY¹

RELATION TO BIOLOGY

The subordination of social science to biology is so evident that nobody denies it in statement, however it may be neglected in practice. This contrariety between the statement and the practice is due to something else besides the faulty condition of social studies ; it results also from the imperfection of biological science, and especially from its most conspicuous imperfection of all,—that of its highest part, relating to intellectual and moral phenomena. It is by this portion that biology and sociology are the most closely connected ; and cerebral physiology is too recent, and its scientific state too immature, to have admitted, as yet, of any proper organization of the relations of the two sciences. Whenever the time for that process arrives, the connection will be seen to bear two aspects. Under the first, biology will be seen to afford the starting point of all social speculation, in accordance with the analysis of the social faculties of man, and of the organic conditions which determine its character. But, moreover, as we can scarcely at all investigate the most elementary terms of the social series, we must construct them by applying the positive theory of human nature to the aggregate of corresponding circumstances, regarding the small materials that we are able to obtain as rather adapted to facilitate and improve this rational determination than to show us what society really was at so early a period. When the social condition has advanced so far as to exclude this kind of deduction, the second

¹ From *The Positive Philosophy of Auguste Comte*, translated by Harriet Martineau, Vol. II, chap. iv, pp. 112–117, London and New York, 1853.

aspect presents itself, and the biological theory of man is implicated with the sociological in a less direct and special manner. The whole social evolution of the race must proceed in entire accordance with biological laws ; and social phenomena must always be founded on the necessary invariableness of the human organism, the characteristics of which — physical, intellectual, and moral — are always found to be essentially the same, and related in the same manner at every degree of the social scale, no development of them attendant upon the social condition ever altering their nature in the least, or, of course, creating or destroying any faculties whatever, or transposing their influence. No sociological view can therefore be admitted at any stage of the science, or under any appearance of historical induction, that is contradictory to the known laws of human nature. No view can be admitted, for instance, which supposes a very marked character of goodness or wickedness to exist in the majority of men, or which represents the sympathetic affections as prevailing over the personal ones, or the intellectual over the affective faculties, etc. In cases like these, which are more common than the imperfection of the biological theory would lead us to expect, all sociological principles must be as carefully submitted to ulterior correction as if they supposed human life to be extravagantly long, or contravened in any other way the physical laws of humanity ; because the intellectual and moral conditions of human existence are as real and as imperative as its material conditions, though more difficult to estimate, and therefore less known. Thus, in a biological view, all existing political doctrines are radically vicious, because, in their irrational estimate of political phenomena, they suppose qualities to exist among rulers and the ruled — here an habitual perverseness or imbecility, and there a spirit of concert or calculation — which are incompatible with positive ideas of human nature, and which would impute pathological monstrosity to whole classes, which is simply absurd. An example like this shows what valuable resources positive sociology must derive from its subordination to biology, and especially in regard to cerebral physiology, whenever it comes to be studied as it ought.

The students of biology have, however, the same tendency to exalt their own science at the expense of that which follows it, that physicists and chemists have shown in regard to biology. The biologists lose sight of historical observation altogether, and represent sociology as a mere corollary of the science of man, in the same way that physicists and chemists treat biology as a mere derivative from the inorganic philosophy. The injury to science is great in both cases. If we neglect historical comparison, we can understand nothing of the social evolution; and the chief phenomenon in sociology—the phenomenon which marks its scientific originality, that is, the gradual and continuous influence of generations upon each other—would be disguised or unnoticed for want of the necessary key, historical analysis. From the time that the influence of former generations becomes the cause of any modification of the social movement the mode of investigation must accord with the nature of the phenomena; and historical analysis therefore becomes preponderant, while biological considerations, which explained the earliest movements of society, cease to be more than a valuable auxiliary and means of control. It is the same thing as when, in the study of inorganic science, men quit deduction for direct observation. It is the same thing as when, in biology, observers proceed from a contemplation of the organism and its medium to an analysis of the ages of the individual being, as a principal means of investigation. The only difference is that the change in the instrument is the more necessary the more complex are the phenomena to be studied. This would have been seen at once, and political philosophy would have been admitted to depend on this condition for its advance, but for the prevalence of the vicious absolute spirit in social speculation, which, neglecting the facts of the case, forever strives to subject social considerations to the absolute conception of an immutable political type, no less adverse to the relative spirit of positive philosophy than theological and metaphysical types, though less indefinite. The consequence of this error is that social modifications proper to certain periods, and passing away with them, are too often supposed to be inherent in human nature, and therefore indestructible. Even

Gall, attending only to imperfect physiological considerations, and neglecting the social, wandered off into a sort of scientific declamation on the subject of war, declaring the military tendencies of mankind to be immutable, notwithstanding the mass of historical testimony which shows that the warlike disposition diminishes as human development proceeds. A multitude of examples of this kind of mistake might be presented, the most striking of which are perhaps in connection with theories of education, which are usually formed on absolute principles, to the neglect of the corresponding state of civilization.

The true nature of sociology is evident enough from what has been said. We see that it is not an appendix to biology, but a science by itself, founded upon a distinct basis, while closely connected, from first to last, with biology. Such is the scientific view of it. As to the method, the logical analogy of the two sciences is so clear as to leave no doubt that social philosophers must prepare their understandings for their work by due discipline in biological methods. This is necessary not only to put them in possession of the general spirit of investigation proper to organic science but yet more to familiarize them with the comparative method, which is the grand resource of investigation in both sciences. Moreover, there is a most valuable philosophical principle common to both sciences which remains to be fully developed before it can attain its final prevalence ; I mean the positive version of the dogma of final causes. This principle belongs eminently to the study of living bodies, in which that distinction is especially marked, and where alone the general idea of it can properly be acquired. But, great as is its direct use in the study of individual life, it is applicable in a much more extensive and essential way in social science. It is by means of this principle that the new philosophy, uniting the two philosophical meanings of the word "necessary," exhibits as inevitable that which first presents itself as indispensable ; and the converse. There must be something in it peculiarly in harmony with social investigations, as we are led up to it by the most opposite methods of approach, one evidence of which is De Maistre's fine political aphorism, "Whatever is necessary exists."

RELATION TO INORGANIC PHILOSOPHY

If sociology is thus subordinated to biology, it must be scientifically related to the whole system of inorganic philosophy, because biology is so. But it is also connected with that system by immediate relations of its own.

In the first place, it is only by the inorganic philosophy that we can duly analyze the entire system of exterior conditions, — chemical, physical, and astronomical, — amidst which the social evolution proceeds, and by which its rate of progress is determined. Social phenomena can no more be understood apart from their environment than those of individual life. All exterior disturbances which could affect the life of individual man must change his social existence; and, conversely, his social existence could not be seriously disturbed by any modifications of the medium which should not derange his separate condition. I need therefore only refer to what I have said in regard to the influence of astronomical and other conditions on vital existence, for the same considerations bear on the case of social phenomena. It is plain that society, as well as individual beings, is affected by the circumstances of the earth's daily rotation and annual movement; and by states of heat, moisture, and electricity in the surrounding medium; and by the chemical conditions of the atmosphere, the waters, the soil, etc. I need only observe that the effect of these influences is even more marked in sociology than in biology, not only because the organism is more complex, and its phenomena of a higher order, but because the social organism is regarded as susceptible of indefinite duration, so as to render sensible many gradual modifications which would be disguised from our notice by the brevity of individual life. Astronomical conditions, above all others, manifest their importance to living beings only by passing from the individual to the social case. Much smaller disturbances would visibly affect a social condition than would disturb an individual life, which requires a smaller concurrence of favorable circumstances. For instance, the dimensions of the globe are scientifically more important in sociology than in biology, because they set bounds to the

ultimate extension of population,—a circumstance worthy of grave consideration in any positive system of political speculation. And this is only one case of very many. If we consider, in regard to dynamical conditions, what would be the effect of any change in the degree of obliquity of the ecliptic, in the stability of the poles of rotation, and yet more in the eccentricity of the earth's orbit, we shall see that vast changes in social life must be produced by causes which could not endanger individual existence. One of the first reflections that presents itself is that positive sociology was not possible till the inorganic philosophy had reached a certain degree of precision. The very conception of stability in human association could not be positively established till the discovery of gravitation had assured us of the permanence of the conditions of life ; and till physics and chemistry had taught us that the surface of our planet has attained a natural condition too rare and too partial, apart from accidents, to affect our estimate ; or, at least, that the crust of the globe admits of only variations so limited and so gradual as not to interfere with the natural course of social development,—a development which could not be hoped for under any liability to violent and frequent physico-chemical convulsions of any extent in the area of human life. There is thus more room to apprehend that inorganic philosophy is not advanced enough to supply the conditions of a positive polity, than to suppose that any real political philosophy can be framed in independence of inorganic science. We have seen before, however, that there is a perpetual accordance between the possible and the indispensable. What we must have we are able to obtain ; and if there are, as in the case of the mutual action of different starry systems, cosmical ideas which are inaccessible to us, we know in regard to sociology now, as to biology before, that they are of no practical importance to us. Wherever we look, over the whole field of science, we shall find that, amidst the great imperfection of inorganic philosophy, it is sufficiently advanced in all essential respects to contribute to the constitution of true social science, if we only have the prudence to postpone to a future time investigations which would now be premature.

IV

THE GENERAL DISTINCTION BETWEEN SOCIOLOGY AND THE SPECIFIC SOCIAL SCIENCES¹

Sociology as the science of society confines itself strictly to human association. It aims to show what is meant by association, how it is brought about, to what process of development it is subject, and what results it produces. Three questions respecting human society are supreme: What? Why? How? Since human association itself is our aim, it is evident that the stress is not to be placed on any particular kind of association. The subject is so large that we shall be obliged to confine ourselves to the general principles of society and to their general application.

In thus aiming at what marks human association as characteristic we also aim at what marks every particular form of human society. If personal forces are the constituent elements of association, then these forces must constitute every kind of society formed. The forces may differ in kind, in number, in intensity, and in degree of development; but no society can exist otherwise than by virtue of these forces. The personal forces exist only in individuals; therefore the idea of society includes that of individuals as possessors of the social forces. In a society for physical culture, for mental culture, for political ends, and for any purpose imaginable, the prime question pertains to the character of the personal forces involved. Just as being includes all being, but only in the most general sense as being, so association includes every society, but only in its most general sense.

Here, then, is the broad difference between social science itself and the specific social sciences: the former discusses whatever

¹ From Introduction to the Study of Sociology, by J. H. W. Stuckenberg pp. 75-77 (copyright, 1898, by A. C. Armstrong & Son, New York).

belongs to society as society and applies the general ideas obtained to the different associations; but each special social science confines itself to a particular phase of society. While sociology deals with the great principles or essences of association, and shows how they apply to all society, the specific social sciences specialize certain forms of association and give an account of their specific characteristics. More details are therefore to be expected in the limited social sciences than in the general social science.

Let us suppose that sociology gives a principiant account of the nature and working of the social forces; that would be a general interpretation of society. Among them are found industrial forces, which are consigned to economics for special treatment; there are also political forces, which are consigned to political science; there are ethical forces, which are consigned to ethics; and so with all the other social forces. Sociology is therefore the general social science of which the special social sciences are differentiations; it is the genus of which they are the species, the trunk on which they are the branches. While each social science has its specific sphere (the operation of specific social forces), it is not within the province of any one of them to determine what association itself is and how the various forms of society are related to it; that is the mission of the more general science, sociology.

After indicating the general relation of sociology to the special social disciplines, we now proceed to consider the relation of some of the latter to our subject.

POLITICAL SCIENCE¹

Various limited societies have tried to absorb society itself and put themselves in its place. In the gens or the tribe, as an enlarged family, it is the family which embodies the social idea. Perhaps the members knew no other association. In Judaism and the Middle Ages the theocracy, the kingdom of God, or the church, is viewed as the essence of society. We can understand

¹ From Introduction to the Study of Sociology, pp. 78-81.

why Aristotle defines man as a political animal, when we remember how the individual was thought to exist for the state.

A part is put for the whole. It is a common mistake to concentrate the attention on a dominant or specially prized feature and lose sight of the rest. Thus a fixed idea is made the sole idea.

We have seen that the development of society beyond the political sphere was the condition for a larger conception of society. For us the state is but an arc in the social circle. Such an exclusive prominence may, however, still be given to the state as to make it difficult for independent or voluntary associations to receive recognition, or to be deemed of sufficient importance to justify social science as distinct from politics. What is left for sociology in such cases when the state absorbs the church, regulates the family, and determines the limits of associative action? By making the state everything, other societies become nothing. Governments have at times been disposed to suppress voluntary associations, for fear they might interfere with the prerogatives of the state, threaten its supremacy, or endanger its very existence. A governmental paternalism which aims so to control the affairs of the people that there may be no occasion for independent associative action hinders the organization of voluntary societies. Thus associations distinct from the state require a certain degree of prominence and importance in order to receive recognition and to deserve special treatment. In the very condition of society a reason is found for those historians who have made history consist chiefly of the state, its monarchs and officials, its diplomacy and its wars.

While we thus understand the exclusive attention to the state as the most perfect organization, yet throughout history, and particularly in modern times, we find numerous open and secret associations which are not included in political science. This is the more evident now since the conception of society has been enlarged to include all kinds of association, not merely formal organizations. Even in its largest sense the state cannot embrace all societies as constituent parts of the body politic. From the political forces numerous other social energies must be differentiated. The action of some of these the state may sanction by

its laws ; the action of others may be left free, neither requiring nor receiving recognition.

Society existed before the state was formed. In what sense would that society be included in political science? Then we have not one state but many states, and the inclusion of all requires a science of international politics. But would such a comprehensive science include all nonpolitical associations and the whole of humanity? Some organizations, as churches, masonic and other lodges, and industrial societies, extend beyond the limits of a state or even of all states, reaching out to individuals and tribes not in a state. How can these be made a part of political science?

The science of politics needs differentiation from sociology and the other social sciences, in order that its own peculiar sphere may be made more distinct. The function of the state is among the most momentous problems of the times, but this function can be distinctly brought out only when contrasted with the other social forces. In Russia the government aims to make society, in the United States society makes the government ; in Russia the progress of voluntary association is a menace to the government, in the United States independent organizations may ignore the very existence of the government. Neither theoretically nor practically is there agreement respecting the limits of the state and its relation to voluntary association.

The science of politics confines itself to the state, explaining its structure and functions, marking the peculiarity of its organization as distinguished from other societies, treating of the relations of the citizens to one another and to the state, and of the government to the governed, the constitution and laws, and all that belongs to the domain of national life. Some have questioned, as intimated above, whether the state ought to be included in sociology or treated separately as outside of society. It is unquestionably a form of association, and therefore within the scope of sociology ; but it is only one of many social forms, and therefore political science cannot take the place of the science of society. The distinctive elements in the state, the peculiar authority it exercises, and the vast importance of

the subject must receive full recognition. Its sphere is that of collective authority and coercion; the sphere of other societies is that of coöperation. Owing to the importance and extent of politics it has become a special science; it is, however, a social science, which indicates its intimate relation to sociology. The state of the people is society in a truer sense than when the state is treated as an abstraction, or as a power hovering over the people, to which unconditional submission is required. We can indeed distinguish between social and political, referring the latter to all that pertains to the state, and the former to society as distinct from the state; but reflection shows that political action is social action as organized in the form of collective authority. The state, whatever its particular form and whoever exercises the authority, is sovereignty. The functions and limits of the sovereignty are among the most important questions of the day.

POLITICAL ECONOMY ¹

The effort to make *a* social science *the* social science has been especially strong in political economy. So long as social science did not exist, but its need was deeply felt, it was not strange that a social study deemed of supreme importance should be treated as the missing discipline. Particularly is this exaltation of economics natural at a time when material interests are absorbing. Then political economy is apt to be regarded as not only furnishing the basis of social being but as also determining those interests which pertain to social well-being. At such times agricultural, industrial, and financial affairs are treated as the chief concerns of the state, as if, when they are attended to, all other things will take care of themselves. It is hardly an exaggeration to affirm that during the nineteenth century political economy has been the gospel of the leading industrial nations, the determining factor in individual and social life. Men have made wealth their divinity and its pursuit their religion. Political economy is to our age what politics was to Greece and Rome, and theology to the Middle Ages. And when society passes from the dominant

¹ From Introduction to the Study of Sociology, pp. 84-86.

political and theological to the economic stage, what wonder that political economy is made the social science?

Carl Marx, Friedrich Engels, and the social democracy give such an exclusive preëminence to political economy as to absorb in it the state and the whole of society. It is not strange that laborers whose existence is an unceasing struggle for the necessities of life regard their industrial redemption as involving their entire social salvation. It must also be remembered that many students come from political economy as their specialty to sociology, so that their sociological theories are naturally affected by their economics.

Other factors have coöperated to reduce Aristotle's "political animal" to an industrial animal, and to transform the science of economics into the science of society. The marvelous progress of natural science has given prominence to material interests and wonderfully stimulated invention; this, together with the industrial development since the middle of the eighteenth century, has made ours the era of political economy.

One reason for creating social science is found in the necessity of showing that man is more than a beast of burden and has other than material interests. The new science will relegate political economy to its proper place, that is, at the bottom, the foundation. Society in order to live and accomplish life's purpose must have bread. We cannot build without a foundation, yet the foundation is not the house; but the importance of the foundation is heightened by increasing the value of the superstructure. Political economy is not degraded by putting it at the base instead of at the top of society.

HISTORY¹

It has been claimed that history covers essentially the same ground which sociology proposes to occupy. History, it is said, deals with all that is significant in society and has left its impress on the development of humanity, seeking to discover the social forces, following the process of social evolution, and describing the achievements of society, while the individual is considered

¹ From Introduction to the Study of Sociology, pp. 88-91.

only so far as he leaves a permanent effect on human thought and life. History includes social action, the establishment and development of institutions, the course of politics, the theories of political economy prevalent at different times, and social phenomena in general. A specialty can be made of the organization and evolution of society among a particular people or in the world. But indispensable as history is for the student of sociology, it cannot construct for him a social science. Some writers on sociology have devoted so much attention to the description and history of society that the impression may be made that there is little else in the subject. The student will obtain the right point of view by discriminating between the aim of the historian and that of the sociologist. The former does not propose to construct but to describe systems. So long as no social science exists, the historian cannot determine the relation which events sustain to it. He does not invent mathematics or science or philosophy; only as they exist and exert an influence is it his province to give an account of them. But the sociologist does not merely describe society and seek the causes of its phenomena; he wants to construct a social system such as has yet no historical existence. His work is that of a scientist or philosopher; from the material furnished by the historian and by observation he draws the principles of society and infers the social laws, a process entirely different from that whose end is historical inquiry. The historian may give an account of the philosophies of Plato, Aristotle, Kant, and Hegel; but it would be as reasonable to expect him to construct them as to become the founder of sociology. As the science of society lies nowhere in history, we cannot look to the historian to discover it there.

That historic discipline which comes nearest covering the same ground as sociology is what the Germans call *Kulturgeschichte*, a history of culture or of civilization. This has been developed independently by German scholars and dates back farther than sociology. It aims to give a history of social evolution, tracing the various stages of culture through which humanity passed until the present degree of civilization was attained. If by this method historic laws of development are discovered, much

that certain sociologists have particularly emphasized will be accomplished. Why cannot this "culture history," as some have claimed, take the place of sociology?

The reason given above, that sociology is not an historical discipline, furnishes the answer. The tendency to reduce it to that is, however, significant and reveals a dominant characteristic of our times. A large class of persons may be designated as mere observers and empiric investigators, in distinction from rational inquirers and philosophic thinkers. Facts are gathered and classified and statistics accumulated till we know not what to do with them; this they regard as all that is required. Their work is essential, but only a beginning. Laws and principles and systems are not picked up from the surface of facts; they are intellectual constructions, a philosophy of the facts. The student must be a thinker in order to become a sociologist. Those who cannot distinguish between a history of culture and a system of culture, between a history and a science of society, are as rational as the empiric who takes a history of human conduct for a system of ethics. The sociologist is not merely intent on discovering what the social facts are; he also insists on knowing what they imply; he listens to what things say, and from this he tries to learn what they mean. Underlying the superficial trend, now so common, is the false supposition that the history of an object is its exhaustive interpretation. Many do not study philosophy *per se*, but its history, and then imagine that they understand philosophy, a conceit which would vanish if they truly became philosophers. An intelligent study of the history of science, of theology, of law, and of other disciplines implies a knowledge of these subjects. This is true of disciplines which have a long history; but sociology is yet to be constructed, and therefore can be still less completely studied in its history than the older disciplines.

The difference between the genesis of a subject and its critical interpretation is important. Scarcely any discrimination is more essential than that between history and observation, on the one hand, and the philosophic effort which, on the other, constructs a rational system. This will become more evident in the discussion of method. Fortunately there are evidences that the day is

waning when sensation was taken for thinking, and when men feared that by an intellectual mastery of things they were in danger of losing the grip of their reality. The rational element in philosophy, science, and in any system of thought adheres strictly to fact, but interprets the fact, relates it, goes to its source and results, and thus, by its explanation, brings out the true reality in place of what only seems to be reality. It is the science of society which makes us truly the possessors of society, intellectually its masters. What has been said will not, therefore, be taken as an indication that we can evolve, speculatively, from our brains systems without facts. History receives its proper place, and this cannot be the means of depreciating its importance.

SOCIATION¹

Men are not, and cannot be, literally united in society; we say they are, but then we must define exactly what we mean. Their bodies are not united, their minds do not coalesce; they remain distinct as personalities. The individual personality in the same man remains distinct from his social personality; the strong man may at the same time grow in individuality and in sociality. In his private life (in all that pertains to him solely as an individual) the individual personality of a man acts; in society, the social personality. After what has been said, we shall not be misunderstood in stating that society consists of social personalities as distinguished from individual or private personalities. This is only another way of saying what was said before, — that society does not consist, strictly speaking, of individuals, but only of so much of them as is associated. "Social" we use here in the sense of all personal powers which act on others, whether coöperatively or antagonistically.

In order to make clear the notion that society consists not of (undiscriminated) personalities but of social personalities, a new word is needed, a word to designate what men share, what associates them, what interacts as a social force. Association refers to the associative factor, and would designate what we aim to

¹ From Introduction to the Study of Sociology, pp. 126-136.

mark as distinct, were that word confined to the associative element as the essence of society. Association is, however, used for a union of men, thus promoting the old error that men are united. But we seek a term which rejects the old error, which gives the idea of association, but confines this association to what is actually associated. Now it happens that "sociate" is used in the same sense as "associate"; but "sociation" is not in use. This noun we now form. We use it to designate those personal forces which interact between men; to indicate what men share, what associates. It stands for all that makes society as distinguished from the sum of individuals. Sociation thus gives the essence of society (that which makes society society), and differentiates it from all other objects. So far as the personality is concerned, this new term distinguishes between the private and the social factors in men. Sociation deals exclusively with the social personality. Regarding a man as social plus private, it has nothing to do with the latter but to eliminate it from the sphere of its inquiries. When we say that certain elements in men are extra-social, we do not mean that they are necessarily antisocial, but only that they do not belong to the social energies which constitute society. Sociation expresses the associative energies as distinct from what is not associative. In association *men* are conceived as the dominant factors, but in sociation the *forces* in men which become social are dominant. The opposite of association is men in isolation; the opposite of sociation is individual powers unassociated. Thus sociation always considers individuals only so far as they have associative interactive factors, leaving a large realm of the individual unconsidered.

Suppose I have a dozen steel horseshoe magnets lying on my table, for the purpose of studying magnetism. How do I contemplate them? Simply so far as they are magnets, — so far as their poles have attractive and repulsive forces. The fact that the magnets are steel concerns me only so far as steel is related to the magnetic forces. I might consider the steel by itself, its composition, its origin, its quality, its weight, its relation to other metals, etc.; but then I should have to enter other departments than that of magnetism. The steel in one horseshoe does not

pass over to the steel in another horseshoe; it is only the magnetic force that interacts; this I abstract from the steel itself and make the object of inquiry.

Let the twelve horseshoes represent twelve individuals. Sociation does not consider them as individuals, but only that in them which interacts between them; it drops the individuals as individuals, for the purpose of concentrating the attention on the attractive and repulsive forces of their magnetism which constitute society.

Sociation therefore deals with social energy and with individuals only as repositories of this energy.

In some cases the bond of union is so definite and simple as to be at once apparent. In a society for vocal culture or in a choir, in an art society or in a scientific association, in an economic combination or labor union, the specific and limited character of the aim and of the force exercised is unmistakable. In every such instance, especially in a choir, it is striking that the association is of individuals only as the possessors of the particular force used.

By thus making society consist of what is actually social, really interactive, and of nothing else, we get the fundamental knowledge respecting the relation of individuals to society. Those who say that society consists of individuals, and mean what they say, cannot discriminate between what is individual and what social in the same personality. If society is truly an organism of individuals, the totality of the individuals must be absorbed by the organism. Others, however, emphasize the individual to the neglect of the organism, as if he had no essential social relations. The conflict ceases so soon as society is discovered to consist only of so much of individuals as is socially interactive. Only that part of me which is literary belongs to the literary society which I help to form; all in me that is not literary is not absorbed by the society, but belongs to another sphere. Since there is an individual (private) personality distinct from the social personality, a man cannot properly be called an organ of society, because he is something besides such an organ; he has elements which are not social. The individual is an organ of society in the

same sense that the Capitol in Washington is a senate chamber. It is a senate chamber, but also much more.

Our view of sociation as distinct from association is proved correct by applying it to various social forms and controversies. Not only does it give new interpretations of what is otherwise obscure, but it also settles certain disputes otherwise interminable.

Let us apply the explanation here given to the old dispute between individualism and socialism. The point is whether the individual or society shall be regarded as supreme. Special prominence is given to the subject in economics in connection with the *laissez-faire* theory. So long as the individual is considered in his totality as a personality the controversy cannot be settled, because as such he is independent of society and also dependent.

But analyze the personality; recognize certain elements in the man which he shares with others, and which thus become social, while other elements remain individual and private; then the question is settled. It is at once seen that in that case individualism and socialism are no longer antagonistic, but each has a sphere in which it is supreme. There is a realm which belongs to a man as an individual, — his intellect, his conscience, his feelings, his private affairs. This realm as the sphere of individual freedom and individual rights is to be guarded sacredly against intrusion and interference. He may be instructed and persuaded, but in these sacredly personal affairs he cannot be coerced. This every just law recognizes. Here individualism reigns and must maintain its dominion.

The same individual, however, has a definite relation to society, and the social elements in him are as distinctly marked as the private. As a social personality he moves in the realm where socialism reigns; that is, social laws prevail here, just as personal or private laws in the other realm. If he wants to speak with his fellows, he must use their language; he must adapt himself to them or them to himself (both processes are social), in order to associate with them. In other words, he must adapt himself to social laws in the social sphere. He may go as he pleases while alone, but in a crowd he must go with the crowd, or as it

sees fit to let him go. If he takes the left side of the bridge at Dresden to cross the Elbe, he is jostled by the crowd coming the other way. Every few steps he is greeted with "*Rechts gehen*," and if he does not go to the right, — on the other side of the bridge, — a policeman may take him there, in order that he may move with and not against the multitude. This is but an illustration of the proverb that in Rome one must do as the Romans do.

Since, therefore, individualism and socialism are both justified, having distinct spheres instead of being antagonistic, the old controversy as to which shall prevail is settled. Both are to prevail, but each in its specific sphere. As a principle, each becomes false and unjust only when it encroaches on the sphere of the other. The new problem which confronts us in place of the old controversy is this: How much in the personality is purely individual, a private matter and therefore a man's own affair, which society may influence but cannot control? And how much is social, belongs to society, and therefore subject to social control?

We now have a law of universal application to the individual and to society. The individual (so far as social) acts on society and society acts on the individual, but the line between individual and social control is distinctly marked. Henceforth the aim should be to individualize all that is individual, and to socialize all that is social. Light is thus thrown likewise on education. The individual is to be developed to the utmost for his own sake; education is to aim at the best personality. He has value in himself, and this value is to be unfolded to the greatest worthiness. But he is also a member of society, and therefore to be educated for social ends. His individual perfection and his social perfection are to be organically united, so that his individual perfection makes him the more perfect socially, and that his social perfection exalts him as an individual.

The law established applies to politics, to business, and to all social affairs. In every department we must distinguish between what is private and what social in the personality. It is one and the same personality, but viewed in different aspects; now

self-centered, then going out into society. The demand is equally imperative that there be the greatest individuality and the most perfect sociality. Where the private and the social elements are properly harmonized the strongest individuality is likewise the strongest social power.

Our analysis of the individual into private and social functions removes another common error. The statement is constantly made that by entering society the individual sacrifices some of his liberty. Only if society is false will it demand that personal liberty be sacrificed. If it is meant that in society an individual cannot act as if he were isolated, the statement simply means that he cannot act contrary to the nature of things. In society a man cannot act as if he were out of society, for the reason that he is in it and not out of it. No true society interferes with the freedom inherent in man, but recognizes and encourages that freedom. By passing from isolation into social relations the individual changes his conditions but does not lose his freedom. Personally, in his private affairs, he is as free as ever he was; but while he retains all the real freedom he had in isolation, his life is augmented by entering society. Besides the real freedom he retains, he now sustains social relations and enters upon social action. Indeed, we may well question whether freedom applies to men isolated. Freedom from what? It is in society, where men can maintain their views in the face of false restraints, that freedom manifests itself.

Another error has been promoted by the theory that the individual is absorbed by society. It has been claimed that individuality will disappear as socialization advances. Hardly a more serious objection could be urged against socialization. Some claim that to associate is to stoop; but in many cases association means exaltation. Emerson says that in society "the virtue in most request is conformity"; but by resisting foolish conformity independence is developed. Tauler said, "I never mingled with men but I came home less of a man than I went out." All, however, are not Taulers; his standard was that of a mystic and he naturally favored solitude; and the society accessible may not have been of the best.

The objection that with socialization individuality vanishes is overthrown when the error on which it rests is exposed. The large sphere of individual freedom is also the sphere of individuality. To rob a man of his freedom by society would make society the means of slavery. The perfection of society is enhanced by social forces backed by individuality, — forces which prevent a dead monotony by promoting diversity in unity. The true society, which distinguishes between the private and the social elements in the personality, encourages individuality.

The view given of sociation throws important light on communism, socialism, and all forms of society. If society is composed of individuals, how can society absorb the individuals? What is it, then, that absorbs the individuals? There is nothing but individuals; therefore they must absorb one another. The necessary limit of communism is what men have in common.

Our explanation of society also interprets another phenomenon otherwise unaccountable. If society depends on individuals (instead of the social factors of individuals), how does it happen that often persons of superior personal excellence and unusual development make but poor society? They meet rarely, are little communicative when they do meet, further no great social interest, are perhaps indifferent even to their own community and state. The answer is that society is not literally constituted of men, but only of their social elements, whose exercise may be sadly neglected. The excellent men under consideration have been developed individually but not socially; each is imprisoned in his particular sphere and cannot enter that of his fellows. Perhaps abstract scholarship so absorbs the attention that the social organism receives none. Even institutions of learning may aggregate rather than associate the professors. Thus personal superiority does not involve social superiority. What men are determines their individual character; what they share determines their social character. The sociation of personal forces is not identical with the association of men.

This distinction also throws light on history. The sociation of an era is not an absolute test of the character of that era. The men may personally be of a high grade, while the sociation

is very imperfect. Thus a generation may be rich in biography and have little history; another generation may be rich in history and poor in biography. A thousand strong men isolated receive no attention in history, while much attention may be given to a thousand men less strong but organized. A million laborers in a country may be passed without mention by the historian; organized they may form the dominant historic current. In order to compare one generation with another we must inquire into the progress made by sociation in them. A thousand separate wires may be invisible at a short distance, or so scattered that only one is seen at a time; but wrought into a single coil, it is distinctly visible and of immense power; yet each wire taken by itself is no stronger than before. There are degrees of isolation and sociation in different ages, and they are important tests of the ages themselves. There is an age of Louis XIV, because sociation in general was so imperfect; hence by a single name that age is characterized in France. Then the sociation of revolutionary forces took place, and the French Revolution stands not for a name but for the volcanic energies of an infuriated people.

The view given of sociation shows why all attempts to apprehend society as an entity or a discrete object have failed. Society is not an organism like a plant or an animal. It is something very real, but not an indissoluble unit. It consists of forces which change constantly. Individuals come and go, their social energies vary, and thus society itself is subject to change. Sometimes the social mechanism is so fixed that there is a certain continuity even amid great changes of individuals, as in certain churches, states, and institutions. When we speak of the Catholic Church we mean a system of theoretical and practical energies (doctrines, institutions, practices); and the millions who belong to that church we think of as Catholic only so far as they are the embodiment of these energies.

Having now given an explanation of sociation and its relation to the ordinary sense of association, it will henceforth be understood what we mean when we use the old terms and speak of society as composed of individuals. When we have spoken thus

in preceding pages, the sense, after the explanation given, cannot be mistaken. Let association be used, but let it mean socialization. The beginner may find it difficult to treat society as a system of forces; but practice will overcome the difficulty, and he will soon wonder how he could ever imagine that society consisted of individuals as totalities, instead of the social energies of individuals.

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PART II—SOCIOLOGY AS A STUDY OF SOCIAL PROGRESS—THE DIRECTION OF SOCIAL PROGRESS

V

SOCIAL DYNAMICS; OR THEORY OF THE NATU- RAL PROGRESS OF HUMAN SOCIETY¹

THE ORDER OF EVOLUTION

Though the elements of our social evolution are connected and always acting on each other, one must be preponderant, in order to give an impulse to the rest, though they may, in their turn, so act upon it as to cause its further expansion. We must find out this superior element, leaving the lower degrees of subordination to disclose themselves as we proceed; and we have not to search far for this element, as we cannot err in taking that which can be best conceived of apart from the rest, notwithstanding their necessary connection, while the consideration of it would enter into the study of the others. This double characteristic points out the intellectual evolution as the preponderant principle. If the intellectual point of view was the chief in our statical study of the organism, much more must it be so in the dynamical case. If our reason required at the outset the awakening and stimulating influence of the appetites, the passions, and the sentiments, not the less has human progression gone forward under its direction. It is only through the more and more marked influence of the reason over the general conduct of man and of society that the gradual march of our race has attained that

¹ From *The Positive Philosophy of Auguste Comte*, translated by Harriet Martineau, Vol. II, chap. vi, pp. 156-180, London and New York, 1853.

regularity and persevering continuity which distinguishes it so radically from the desultory and barren expansion of even the highest of the animal orders, which share, and with enhanced strength, the appetites, the passions, and even the primary sentiments of man. If the statical analysis of our social organism shows it resting at length upon a certain system of fundamental opinions, the gradual changes of that system must affect the successive modifications of the life of humanity; and this is why, since the birth of philosophy, *the history of society has been regarded as governed by the history of the human mind*. As it is necessary, in a scientific sense, to refer our historical analysis to the preponderant evolution, whatever it may be, we must in this case choose, or rather preserve, the general history of the human mind as the natural guide to all historical study of humanity. One consequence of the same principle — a consequence as rigorous but less understood — is that we must choose for consideration in this intellectual history the most general and abstract conceptions, which require the exercise of our highest faculties. Thus it is the study of the fundamental system of human opinions with regard to the whole of phenomena — in short, the history of philosophy, whatever may be its character, theological, metaphysical, or positive — which must regulate our historical analysis. No other department of intellectual history, not even the history of the fine arts, including poetry, could, however important in itself, be employed for this object; because the faculties of expression, which lie nearer to the effective faculties, have always, in their palmiest days, been subordinated, in the economy of social progress, to the faculties of direct conception. The danger (which is inherent in every choice, and which is least in the choice that I have made) of losing sight of the interconnection of all the parts of human development may be partly guarded against by frequently comparing them, to see if the variations in any one corresponds with equivalent variations in the others. I believe we shall find that this confirmation is eminently obtainable by my method of historical analysis. This will be proved at once if we find that the development of the highest part of human interests is in accordance with that of the lowest,

— the intellectual with the material. If there is an accordance between the two extremes, there must be also between all the intermediate terms.

We have indicated the general direction of the human evolution, its rate of progress, and its necessary order. We may now proceed at once to investigate the natural laws by which the advance of the human mind proceeds. The scientific principle of the theory appears to me to consist in *the great philosophical law of the succession of the three states,—the primitive theological state, the transient metaphysical, and the final positive state,*—through which the human mind has to pass in every kind of speculation. This seems to be the place in which we should attempt the direct estimate of this fundamental law, taking it as the basis of my historical analysis, which must itself have for its chief object to explain and expand the general notion of this law by a more and more extended and exact application of it in the review of the entire past of human history. I hope that the frequent statement and application of this law throughout the preceding part of my work will enable me to condense my demonstration of it here, without impairing its distinctness or injuring its efficacy in such ulterior use as we shall have to make of it.

LAW OF THE THREE PERIODS

The reader is by this time abundantly familiar with the interpretation and destination of the law. All thoughtful persons can verify for themselves its operation in individual development, from infancy to manhood, as I pointed out at the beginning of this work. We can test it, as we have tested other laws, by observation, experiment, and comparison. I have done so through many years of meditation, and I do not hesitate to say that all these methods of investigation will be found to concur in the complete establishment of this historical proposition, which I maintain to be as fully demonstrated as any other law admitted into any other department of natural philosophy. Since the discovery of this law of the three periods, all positive philosophers have agreed on its special adaptation to the particular science in

which each was interested, though all have not made the avowal with equal openness. The only objections that I have encountered have related merely to the universality of its application. I hold it to be now implicitly recognized with regard to all the sciences which are positive; that is, the triple evolution is admitted in regard to all cases in which it is accomplished. It is only in regard to social science that its application is supposed to be impossible; and I believe the objection to signify nothing more than that the evolution is in this case incomplete. Social science has, with all its complexity, passed through the theological state, and has almost everywhere fully attained the metaphysical; while it has nowhere yet risen to the positive, except in this book. I shall leave the assertion of the law in regard to sociology to the demonstration which my analysis will afford, for those who cannot perceive in this volume, as a whole, the nascent realization of this last philosophical process could not be convinced by argument. Leaving the historical verification of the law, therefore, to the reader, I invite attention to its philosophical explanation. It is not enough that the succession of the three states is a general fact. Such generality would go for more in any other science than in sociology, because, as we have seen, our biological philosophy enables us to conceive of all the main relations of social phenomena *a priori*, independently of their direct investigation, and we need confirmation of our conceptions by direct knowledge of human nature and experience. An *a priori* conception of a law so important as this is of the deepest interest in the study of social dynamics; and, to confirm it, we must carefully mark the general grounds, derived from an exact knowledge, which have rendered indispensable on the one hand, and inevitable on the other, that succession of social phenomena which take their course under the operation of this law. The logical grounds have already been assigned at the outset of the work, and repeatedly since; and it is with the moral and social that we now have to do, and we can review them without subjecting ourselves to the reproach of severing the parts of a philosophical demonstration, which are in their nature bound up together and therefore inseparable.

THE THEOLOGICAL PERIOD

The necessity of the intellectual evolution I assert lies in the primary tendency of man to transfer the sense of his own nature into the radical explanation of all phenomena whatever. Philosophers tell us of the fundamental difficulty of knowing ourselves; but this is a remark which could not have been made till human reason had achieved a considerable advance. The mind must have attained to a refined state of meditation before it could be astonished at its own acts, — reflecting upon itself a speculative activity which must be at first incited by the external world. If, on the one hand, man must begin by supposing himself the center of all things, he must, on the other hand, next set himself up as a universal type. The only way that he can explain any phenomena is by likening them, as much as possible, to his own acts, — the only ones whose mode of production he can suppose himself, by the accompanying sensations, to understand. We may therefore set up a converse statement and say that man knows nothing but himself; and thus his philosophy, in his earliest stage, consists principally in transferring this spontaneous unity, more or less fortunately, into all subjects which may present themselves to his nascent attention. It is the highest proof of his philosophical maturity when he can, at length, apply the study of external nature to his own. When I laid this down as the basis of biological philosophy I intimated the extreme rarity of such an attainment. At the outset, under the inverse process, the universe is always subordinated to man in speculative as well as in active respects. We shall not have attained a truly rational position till we can reconcile these two great philosophical views, at present antagonistic, but admitting of being made mutually complementary, and, in my opinion, prepared for being so from this time forward. Such a harmony is even now barely conceivable in the brightest insight of philosophical genius, and there could have been no choice between the two courses in the earliest days of human development. The starting point must have been that which alone was naturally possible. This was the spontaneous origin of the theological philosophy, the elementary

spirit of which consists in explaining the intimate nature of phenomena and their mode of production, and in likening them as much as possible to the acts of human will, through our primary tendency to regard all beings as living a life analogous to our own, and often superior, from their greater habitual energy. This procedure is so eminently exclusive that men are unable to emancipate themselves from it, even in the most advanced stages of evolution, except by abandoning altogether these inaccessible researches and restricting themselves to the study of the laws of phenomena, apart from their causes. Whenever, at this day, the human mind attempts to pass these inevitable limits, it involuntarily falls again into the primary errors, even in regard to the simplest phenomena, because it recurs to an aim and point of view essentially analogous, in attributing the production of phenomena to special volitions internal or more or less external. One case presents itself as an example, of the simplest scientific character, — that of the memorable philosophical error of the illustrious Malebranche in regard to the explanation of the mathematical laws of the elementary collision of solid bodies. If such a mind, in such an age, could explain such a theory in no other way than by an express recurrence to the continuous activity of a direct and special providence, we cannot doubt the tendency of our reason towards a radically theological philosophy whenever we attempt to penetrate, on any ground whatever, the intimate nature of phenomena.

INTELLECTUAL INFLUENCE OF THE THEOLOGICAL PHILOSOPHY

The inevitableness of the theological philosophy is its most radical property and the first cause of its long ascendancy. We have seen before that it was necessary, as the only possible beginning of our intellectual evolution, for the facts which must form the basis of a positive theory could not be collected to any purpose without some preliminary theory which should guide their collection. Our understanding cannot act without some doctrine, false or true, vague or precise, which may concentrate and stimulate its efforts and afford ground for enough speculative

continuity to sustain our mental activity. Our meteorological *observations*, as we call them, show us how useless may be vast compilations of facts, and how really unmeaning, while we are destitute of any theory whatever. Those who expect that the theory will be suggested by the facts do not understand what is the course necessarily pursued by the human mind, which has achieved all real results by the only effectual method, — of anticipating scientific observations by some conception (hypothetical in the first instance) of the corresponding phenomena. Such a necessity has already been shown to be especially marked in the case of social speculations, not only from their complexity but from the peculiarity that a long preparatory development of the human mind and of society constitutes the phenomena of the case, independently of all preparation of observers and all accumulation of observations. It may be worth observing that all the partial verifications of this fundamental proposition that we meet with in the different sciences confirm each other, on account of our tendency to unity of method and homogeneity of doctrine, which would incline us to extend the theological philosophy from one class of speculations to another, even if we should not so treat each one of them separately.

The original and indispensable office of the theological philosophy is then to lead forth the human mind from the vicious circle in which it was confined by the two necessities of observing first in order to form conceptions and of forming theories first in order to observe. The theological philosophy afforded an issue by likening all phenomena whatever to human acts, — directly in the first instance, by supposing all bodies to have a life more or less like our own, and indirectly afterwards by means of the more durable and suggestive hypothesis which adds to the visible system of things an invisible world peopled by superhuman agents, who occasion all phenomena by their action on matter otherwise inert. The second stage is especially suitable to the human mind which begins to feel its difficulties and its needs; for every new phenomenon is accounted for by the supposition of a fresh volition in the ideal agent concerned, or, at most, by the easy creation of a new agent. However futile these

speculations may now appear, we must remember that in all times and everywhere they have awakened human thought by offering to it the only material which it could at first accept. Besides that there was no choice, the infant reason can be interested by nothing but sublime solutions obtained without any deep and sustained conflict of thought. We at this day find ourselves able after suitable training to devote ourselves to the study of the laws of phenomena, without heed to their first and final causes ; but still we detect ourselves occasionally yielding to the infantine curiosity which pretends to a power of knowing the origin and the end of all things. But such severity of reason as we are capable of has become attainable only since the accumulation of our knowledge has yielded us a rational hope of finally discovering the natural laws that were altogether out of reach in the early states of the human mind ; and the only alternative from total inactivity was, in those days, in the pursuit of the inaccessible subjects which are represented by the theological philosophy. The moral and social grounds of this philosophy were as necessary as the intellectual. Its moral influence was to inspire man with confidence enough for action, by animating him with a sense of a position of supremacy. There is something astonishing in the contrast between the actual powers of man in an infant state and the indefinite control which he aspires to exercise over external nature, just, as there is in his expectation of understanding matters which are inaccessible to reason. The practical and the speculative expectation alike belong to the theological philosophy. Supposing all phenomena to be regulated by superhuman will, man may hope to modify the universe by his desires,—not by his personal resources but by the access which he believes himself to have to the imaginary beings whose power is unlimited ; whereas, if he was aware from the beginning that the universe is subject to invariable laws, the certainty that he could no more influence than understand them would so discourage him that he would remain forever in his original apathy, intellectual and moral. We find ourselves able to dispense with supernatural aid in our difficulties and sufferings, in proportion as we obtain a gradual control over nature by a knowledge of her

laws; but the early races of men were in an opposite condition. They could obtain confidence, and therefore courage, only from above, and through the illusion of an illimitable power residing there, which could on any occasion afford them irresistible aid. I am not referring now to any hope of a future life. We shall see presently that it was not till a much later period that that hope exercised any important social influence; and even in more recent times we shall find that the effect of the religious spirit on the conduct of human life proceeds much more from belief in actual and special immediate aid than from the uniform perspective of a remote future existence. This seems to me the leading aspect of the remarkable state which is produced in the human brain by the important intellectual and moral phenomenon of prayer, the admirable properties of which, when it has attained its full physiological efficacy, are very manifest in the earliest stage of progress. After a long decline of the religious spirit the notion of *miracle* was naturally formed, to characterize the events which had become exceptional and were attributed to divine intervention; but the very conception shows that the general principle of natural laws had become familiar, and even preponderant, because the only sense of *miracle* was a transient suspension of natural laws. While the theological philosophy was all in all, there were no miracles, because everything was equally marvelous, as we see by the artless descriptions of ancient poetry, in which the commonest incidents are mixed up with the most monstrous prodigies, and undergo analogous explanations. Minerva intervenes to pick up the whip of a warrior in military games, as well as to protect him against a whole army; and in our own time the devotee is as importunate in praying for his smallest personal convenience as for the largest human interests. In all ages the priest has been more occupied with the solicitations of his flock about immediate favors of Providence than with their care for their eternal state. However this may be, we see that it is a radical property of the theological philosophy to be the sole support and stimulus of man's moral courage, as well as the awakener and director of his intellectual activity. To this we must add as another attraction of man to this philosophy, that

the affective influence comes in to fortify the speculative. Feeble as are the intellectual organs, relatively considered, the attractive moral perspective of an unbounded power of modifying the universe by the aid of supernatural protectors must have been most important in exciting mental action. In our advanced state of scientific progress we can conceive of the perpetual pursuit of knowledge for the sake of the satisfaction of intellectual activity, joined to the tranquil pleasure which arises from the discovery of truth; yet it is doubtful whether such natural stimulus as this would always suffice without collateral instigations of glory, of ambition, or of lower and stronger passions, except in the case of a very few lofty minds,—and with them only after training in the requisite habits. And nothing of this kind can be supposed possible in the early days, when the intellect is torpid and feeble and scarcely accessible to the strongest stimulus; nor yet afterwards, when science is so far advanced as to have attained some speculative success. In the working out of such speculation the mental activity can be sustained by nothing short of the fictions of the theological philosophy about the supremacy of man and his unbounded empire over external nature, as we have seen in regard to astrology and alchemy. In our own time, when there are enlightened men who hold such delusions in regard to social speculations alone, we see how irrationally they expect to modify at will the whole course of political phenomena, in which they could not take any adequate scientific interest without such an expectation.¹ What we see of the influence of this view in maintaining the old polities may give us some faint idea of its power when it pervaded every part of the intellectual system and illusion beset the reason of man whichever way he turned. Such then was the moral operation of the theological philosophy,—stimulating man's active energy by the offer, in the midst of the troubles of his infantine state, of absolute empire over the external world, as the prize of his speculative efforts.

¹ Were Comte writing to-day, he would doubtless find illustrative material in the doctrine of "manifest destiny." The confidence inspired by the belief that the American people are the chosen instrument of Providence for the civilizing of the heathen is doubtless a factor in their success. — ED.

SOCIAL INFLUENCES OF THE THEOLOGICAL PHILOSOPHY

The social evidences under this head will be fully treated in the following chapters, so that we may dismiss them now with a very short notice, important as they are, and the more easily because this class of evidences is the most indisputable of the three. There are two views which must be considered in relation to the high social office of the theological philosophy: first, its function in organizing society; and, next, its provision for the permanent existence of a speculative class. As to the first, we must perceive that the formation of any society, worthy to be so called, supposes a system of common opinions such as may restrain individual eccentricity; and such an influence, if needful now, when men are bound together by such a concurrence of obligations as high civilization introduces, must be absolutely indispensable in the infancy of society, when families adhere to each other so feebly by means of relations as precarious as they are defective. No concurrence of interests, nor even sympathy in sentiment, can give durability to the smallest society, if there be not intellectual unanimity enough to obviate or correct such discordance as must inevitably arise. It has been shown that, indolent as our intellectual faculties are in comparison with the others, reason must rule not only domestic but also social and yet more political life; for through it alone can there be any organization of that reaction of society on the individual which appoints the function of government and absolutely requires a system of common opinions about nature and man. Such a system, then, is a political necessity, and especially in the infancy of society. But, on the other hand, we must admit that the human mind, having thus furnished a basis for social organization, must depend for its further development on society itself, whose expansion is really inseparable from that of human intelligence. Here we see that society is in a vicious circle in a political as well as a logical view, through the opposition of two equal necessities; and here again the only possible issue is afforded by the theological philosophy. It directs the first social organization as it forms a system of common opinions, and it does it by forming such a system.

Because we see it now in such a state of decomposition that its advocates lose sight of the unity of opinions that it once secured, and are themselves involved in intellectual discordance, we must not forget how, in those days of vigor by which it must be judged, it established an intellectual communion which constituted its most remarkable political function. The police consideration of a future life is wrongly attributed to this period of human society. It arose long after, and was of very inferior importance to the intellectual agreement which preceded it; and its operation would not be so erroneously exaggerated but that religion has so far faded out of men's minds as to leave no other strong habitual remembrance than of its grossest impressions.

INSTITUTION OF A SPECULATIVE CLASS

Another way in which the theological philosophy was politically indispensable to human progress was by instituting, in the midst of society, a special class regularly devoted to speculative activity. In this view the social supremacy of the theological philosophy has lasted to our own time. It is scarcely possible for us to form any but an indirect idea of the difficulty of establishing, in the earliest period of society, any permanent division between theory and practice, such as is effected by the existence of a class regularly occupied with speculation. Even now, amidst all the refinement of our mental habits, we find extreme difficulty in duly estimating any new operation which has no immediate practical bearing; and by this we may imperfectly understand how impossible it was, in the remotest ages, to institute among populations of warriors and slaves a corporation that should be disengaged from military and industrial employments, and whose activity should be mainly of an intellectual kind. Such a class could, in those times, have been neither established nor tolerated if it had not been introduced in the natural course of social movement and invested with authority beforehand by the influence of the theological philosophy. Thus the political function of that philosophy was to establish a speculative body whose social existence not only admitted of no preparatory discussion but was

itself an indispensable preparation for the regular organization of all other classes. Whatever might have been the confusion of intellectual labor and the inanity of the leading investigations of the sacerdotal orders, it is not the less true that the human mind owes to them the first effectual separation between theory and practice, which could take place in no other manner. Mental progress, by which all other progress is directed, would certainly have been destroyed at its birth, if society had continued to be composed of families engaged in the cares of material existence, or, as the only alternative, in the excitement of a brutal military activity. Any spiritual expansion supposes the existence of a privileged class, enjoying the leisure indispensable to intellectual culture, and at the same time urged, by its social position, to develop to the utmost the kind of speculative activity compatible with the primitive state of humanity; and this description is answered by the sacerdotal institution established by the theological philosophy. Though, in the decrepitude of the old philosophy, we see the theological class sunk in mental lethargy, we must not forget that but for their activity in the days of its prime, human society would have remained in a condition much like that of a company of superior monkeys. By forming this speculative class, then, the theological philosophy fulfilled the political conditions of a further progression of the human mind.

Such are the qualities, intellectual, moral, and social, which secured the supremacy of the theological philosophy at the outset of human progress. This is the only part of my sociological demonstration which is at all open to dispute, and this is one reason why I have dwelt so long upon it, but it is not the only reason. Another and a greater is that this view contains the radical principle of the whole demonstration, the remainder of which will not detain us long.

THE POSITIVE STAGE

If this starting point of human development has been placed beyond dispute, the final or positive stage does not admit of it. We have seen enough of the establishment of the positive philosophy in other departments to be satisfied of its destined

prevalence in sociology. For the same reasons which explain and justify the early supremacy of the theological philosophy we see that it must be a provisional state, for its supremacy was owing to its aptitude to meet the needs of a primitive state of humanity; and those needs are not the same, nor requiring the same philosophy to satisfy them, as those which arise in a more advanced stage of human evolution. After having awakened human reason and superintended its progress in the absence of a more real philosophy, theology began to repress the human mind from the first moment of its coming into direct antagonism with the positive philosophy. And in the same way, in its moral relations, it imparted at first a consolatory confidence and active energy, which have become transmuted, by too long a duration, into oppressive terror and a faint apathy which have been too common a spectacle, since it has been driven to struggle to retain its hold instead of extending its dominion. There is no more question of the moral than of the intellectual superiority and final supremacy of the positive philosophy, capable as it is of developing in us an unshaken vigor and a deliberate steadfastness, directly derived from our own nature, without any external assistance or any imaginary hindrance. And again, in regard to its social bearings, though the ascendancy of the theological philosophy lasted longer on this ground than on the other two, it is evident enough at present that instead of uniting men, which was its proper function at first, it now divides them, so that after having created speculative activity it has ended with radically hindering it. The function of reuniting, as of stimulating and directing, belongs more and more, as religious belief declines, to the conceptions of positive philosophy, which alone can establish that intellectual community all over the world on which the great future political organization is to be grounded. The intellectual destination of the two philosophies has been sufficiently established in our review of all the departments of natural philosophy. Their moral and social destination will be illustrated in succeeding chapters of this volume. My historical analysis will explain to us the continuous decline of the one and the corresponding rise of the other, from the earliest period of human progression.

It may appear paradoxical to regard the theological philosophy as in a steadily declining state intellectually, at the very time that it was fulfilling its most exalted mission; but we shall find satisfactory scientific evidence that Catholicism, its noblest social work, must necessarily be its last effort, on account of the germs of disorganization which must thenceforth grow more and more rapidly. We need here, therefore, only assign the general principle of the inevitable tendency of the human mind toward an exclusive positive philosophy throughout the whole range of the intellectual system.

ATTEMPTED UNION OF THE TWO PHILOSOPHIES

The general, like the individual, human mind is governed by imagination first, and then, after a sufficient exercise of the faculties at large, more and more by reason. The same grounds on which the process takes place in the individual case determine that of the whole species; and with the more certainty and power on account of the greater complexity and perpetuity of the social organism. Supreme as the theological philosophy once was, it is certain that such a method of philosophizing was resorted to only because no other was possible. Wherever there has been a choice in regard to any subject whatever, man has always preferred the study of the laws of phenomena to that of their primary causes, though prior training, which there has been no rational education adapted to counteract, has often occasioned a lapse into his old illusions. Theological philosophy has, however, never been absolutely universal; that is, the simplest and commonest facts in all classes of phenomena have always been supposed subject to natural laws, and not to the arbitrary will of supernatural agents. Adam Smith made the remark that there never was, in any age or country, a god of weight. In more complex cases, if only the relations of phenomena are seen to be invariable, the most superficial observer recognizes the presence of law. Even among moral and social phenomena, where the entrance of positive philosophy has been interdicted, we are all obliged to act daily on the supposition of natural laws, in

order to conduct the common affairs of life ; for all forecast would be impossible if we supposed every incident to be ascribable to supernatural agency, and no other resource therefore possible than prayer, for influencing the course of human actions. It is even noticeable that the principle of the theological philosophy itself lies in the transference of the first beginnings of the laws of human action to the phenomena of external nature ; and thus the germ of the positive philosophy is at least as primitive as that of the theological philosophy itself, though it could not expand till a much later time. This idea is very important to the perfect rationality of our sociological theory, because, as human life can never present any real creation, but only a gradual evolution, the final spread of the positive spirit would be scientifically incomprehensible, if we could not trace its rudiments from the very beginning. From that scarcely appreciable presence at the beginning, the rise of the positive spirit has been recognizable, in proportion to the extension and generalization of our observations, and the theological philosophy has been slowly but steadily driven back within the narrowing limits of phenomena whose natural laws were still unknown. Thus was the function of the old philosophy clearly a provisional one, — to maintain our mental activity by the only exercise open to it till the positive philosophy should usher it into the wide field of universal knowledge made accessible to the whole race. This destination has only recently exhibited itself in an unquestionable way since the disclosure of natural laws in phenomena so numerous and so various as to suggest the necessary existence of analogous laws in all other departments, however remote their actual discovery may be.

It does not follow, from anything that I have said, that the two philosophies were always visibly opposed to each other. On the contrary the physical study must have succumbed to the theological spirit if they had seemed at the outset to be incompatible. In fact, the study of the laws of phenomena appeared, for a long course of time, to agree very well with the investigation into their causes. It was only when observations became more connected, and disclosed important relations, that the radical opposition of the two doctrines began to be felt. Before the

antagonism was avowed the positive spirit manifested its repugnance to the futile absolute explanations of the theological philosophy, and the theological spirit lavished its disdain on the circumspect march and modest investigations of the new school, while still there was no idea that the study of real laws was irreconcilable with that of the essential causes. When natural laws of considerable scope were at length discovered, the incompatibility became clear between the preponderance of imagination and that of reason, between the absolute spirit and the relative, and, above all, between the ancient hypothesis of the sovereign direction of events by an arbitrary will and the growing certainty that we can foresee and modify them by the rational access of human wisdom. It is only in our own time that the antagonism has been extended to all parts of the intellectual field; and even up to the last moment the students of special subjects have believed that by confining themselves to the investigation of natural laws, and paying no attention to the nature of beings and mode of production of phenomena, they might find physical researches compatible with the explanations of theology; while theology made its own concessions in the form of a provisional notion of a universal providence, combined with special laws which it had imposed on itself. The conduct of Catholicism in interdicting the habitual use of miracle and prophecy, which prevailed so largely in ancient times, seems to me to present in religious affairs a transient situation analogous to that which is exhibited by what is called the institution of constitutional monarchy in the political world, each being in its own way an indisputable symptom of decline. However this may be, the insufficiency of the theological philosophy manifests itself to popular observation in that form of popular evidence which can alone reach the majority of mankind,—in its comparison with its opponent in the application of means. The positive philosophy enables us to foresee and to modify natural events, and thus satisfies more and more, as it advances, the most urgent intellectual needs of humanity, while the ancient philosophy remains barren; so that its fanciful explanations are more and more neglected, while the new philosophy obtains a perpetually

firmer hold on the public reason. Those who have remained faithful to their attachment to the theological philosophy make no practical use of it in their daily life and ground their predilection for it on its characteristic generality, so that when its antagonist shall have become systematized as fully as it is destined to be, the ancient philosophy will have lost the last attribute which has ever entitled it to social supremacy.

THE METAPHYSICAL PERIOD

We have now only to take a cursory survey of the intermediate state. I have pointed out more than once before, that any intermediate state can be judged of only after a precise analysis of the two extremes. The present case is a remarkable illustration of this necessity; for, if it is once admitted that the human mind must set out from the theological state and arrive certainly at the positive, we may easily understand how it must pass through the metaphysical, which has no other destination than to afford a transition from the one to the other. The bastard and mobile character of the metaphysical philosophy fits it for this office, as it reconciles, for a time, the radical opposition of the other two, adapting itself to the gradual decline of the one and the preparatory rise of the other, so as to spare our dislike of abrupt change and to afford us a transition almost imperceptible. The metaphysical philosophy takes possession of the speculative field after the theological has relinquished it and before the positive is ready for it; so that in each particular case the dispute about the supremacy of any of the three philosophies is reduced to the mere question of opportuneness, judged by a rational examination of the development of the human mind. The method of modification consists in substituting gradually the entity for a deity when religious conceptions become so generalized as to diminish perpetually the number of supernatural agents as well as their active intervention, and at length arrive, professedly if not really, at rigorous unity. When supernatural action loses its original specialty it consigns the immediate direction of the phenomenon to a mysterious entity at first emanating

from itself, but to which daily custom trains the human mind to refer more and more exclusively the production of each event. This strange process has favored the withdrawal of supernatural causes and the exclusive consideration of phenomena, — that is, the decline of the theological and the rise of the positive spirit. Beyond this the general character of this philosophy is that of the theological, of which it is only a modification, though the chief. It has an inferior intellectual consistency and a much less intense social power; so that it is much better adapted for a critical function than for any real organization; and it is those very qualities which disable it for resistance to the growth of the positive spirit. On the one hand, the increasing subtlety of metaphysical speculations is forever reducing their characteristic entities to mere abstract denominations of the corresponding phenomena, so as to render their own impotence ridiculous when they attempt explanations, — a thing which would not have been possible, in an equal degree, with purely theological forms. On the other hand, its deficiency of organizing power, in consequence of its radical inconsistency, must prevent its maintaining any such political struggle as theology maintained against the spread of positive social philosophy. However, it obtains a respite by its own equivocal and mobile nature, which enables it to escape from rational discussion even more than the theological philosophy itself, while the positive spirit is as yet too imperfectly generalized to be able to attack the only substantial ground of their common authority, — the universality which they can boast but which it has not. However this may be, we must admit the aptitude of metaphysics to sustain provisionally our speculative activity on all subjects till it can receive more substantial aliment, at the same time carrying us over from the theological *régime* further and further in the direction of the positive. The same aptitude appears in its political action. Without overlooking the serious intellectual and moral dangers which distinguish the metaphysical philosophy, its transitional quality accounts to us for the universal ascendancy which it has provisionally obtained among the most advanced societies, which cannot but have an instinctive sense of some indispensable office to be fulfilled by

such a philosophy in the evolution of humanity. The irresistible necessity of this temporary phase is thus on all grounds as unquestionable as it could be prior to the direct analysis to which it will be subjected in the course of our historical review.

COEXISTENCE OF THE THREE PERIODS

During the whole of our survey of the sciences I have endeavored to keep in view the great fact that all the three states, theological, metaphysical, and positive, may and do exist at the same time in the same mind in regard to different sciences. I must once more recall this consideration and insist upon it, because in the forgetfulness of it lies the only real objection that can be brought against the grand law of the three states. It must be steadily kept in view that the same mind may be in the positive state with regard to the most simple and general sciences, in the metaphysical with regard to the more complex and special, and in the theological with regard to social science, which is so complex and special as to have hitherto taken no scientific form at all. Any apparent contradiction must certainly arise, even if it could be shown to exist from the imperfection of our hierarchical arrangement, and not from the law of evolution itself. This once fully understood, the law itself becomes our guide in further investigation, as every proved theory does, by showing us by anticipation what phenomena to look for and how to use those which arise; and it supplies the place of direct exploration when we have not the necessary means of investigation. We shall find that by this law alone can the history of the human mind be rendered intelligible. Having convinced ourselves of its efficacy in regard to all other sciences, and in interpreting all that has yet come to pass in human history, we must adhere to it steadily in analyzing the present and in forming such anticipation of the future as sociology, being a real science, enables us to rely upon.

To complete my long and difficult demonstration I have only now to show that material development as a whole must follow a course not only analogous but perfectly correspondent with that of intellectual development, which as we have seen governs every other.

CORRESPONDING MATERIAL DEVELOPMENT

All political investigation of a rational kind proves the primitive tendency of mankind in a general way to a military life, and to its final issue in an industrial life. No enlightened mind disputes the continuous decline of the military spirit and the gradual ascendancy of the industrial. We see now under various forms and more and more indisputably, even in the very heart of armies, the repugnance of modern society to a military life. We see that compulsory recruiting becomes more and more necessary, and that there is less and less voluntary persistence in that mode of life. Notwithstanding the immense exceptional development of military activity which was occasioned by anomalous circumstances at the beginning of the present century, our industrial and pacific instincts have returned to their regular course of expansion, so as to render us secure of the radical tranquillity of the civilized world, though the peace of Europe must often appear to be endangered through the provisional deficiency of any systematic organization of international relations, — a cause which though insufficient to produce war keeps us in a state of frequent uneasiness. We need not then go over again the proof of the first and last terms of the evolution, which will be abundantly illustrated by the historical analysis that I shall offer. We have only to refer the facts of human experience to the essential laws of human nature and the necessary conditions of social development, — a scientific procedure which has never yet been attempted.

PRIMITIVE MILITARY LIFE

As long as primitive man was averse to all regular toil, the military life alone furnished a field for his sustained activity. Apart from cannibalism, it offered the simplest means of subsistence. However deplorable the necessity, its universal prevalence and continuous development, even after subsistence might have been obtained by other means, proves that the military *régime* must have had some indispensable, though provisional, office to fulfill in the progression of the race. It was indeed the

only one under which human industry could make a beginning, — in the same way that the scientific spirit could not have arisen without the protection of the religious. The industrial spirit supposed the existence of a considerable social development, such as could not have taken place till isolated families had been connected by the pursuits of war. The social and yet more the political properties of military activity are, in their early stages, perfectly clear and decisive, and, in short, fully appropriate to the high civilizing function which they had to fulfill. It was thus that habits of regularity and discipline were instituted and the families of men were brought into association for warlike expeditions or for their common defense. The objects of association could not possibly be more obvious or urgent, nor the elementary conditions of concurrence more irresistible. In no other school could a primitive society learn order, as we may see at this day in the case of those types of ancient humanity, — the exceptional individuals who cannot now be made amenable to industrial discipline. This ascendancy of the military spirit was indispensable not only to the original consolidation of political society but yet more to its continuous extension, which could not otherwise have taken place but with excessive slowness; and such extension was, to a certain degree, indispensable to the final development of human industry. Thus, then, we find humanity involved in the same kind of vicious circle with regard to its temporal as we saw it to be with regard to its spiritual progress; and in both cases an issue was afforded by the fortunate expansion of a preliminary tendency. In fact, the necessary basis of the military *régime* has everywhere been the individual slavery of the producing class, by which warriors were allowed the full and free development of their activity. We shall see hereafter that the great social operation which was to be accomplished in due time by the continuous progression of a military system, powerfully instituted and wisely carried out, must have failed in its earliest stages. We shall also see how this ancient slavery was the necessary preparation for the final prevalence of the industrial life, by imposing on the majority of the race, irresistibly and exclusively, that toil to which man is constitutionally averse, though an ultimate condition of

laborious perseverance was in store for all. To view the case without prejudice we must transport ourselves to those primitive times, and not regard the slavery of that age with the just horror with which we view that of modern times,—the colonial slavery of our day, which is truly a social monstrosity, existing as it does in the heart of an industrial period, subjecting the laborer to the capitalist in a manner equally degrading to both. The ancient slavery was of the producer to the warrior, and it tended to develop their respective energies so as to occasion their final concurrence in the same social progression.

THE MILITARY RÉGIME PROVISIONAL

Necessary as this military *régime* was, it was not the less merely provisional. While industrial activity has the fine quality of bearing the most energetic extension among all individuals and nations without making the rise of the one irreconcilable with that of the other, it is evident that the exaltation of the military life among any considerable portion of the race must occasion the restriction of all the rest; this being, in fact, the proper function of the *régime* in regard to the whole field of civilization. Thus, while the industrial period comprehends the whole term of human progress under natural laws,—that is, the whole future that we can conceive of,—the military period could last no longer than the formation of those preparatory conditions which it was its function to create. This end was attained when the chief part of the civilized world was at length united under the same rule; that is, in regard to Europe, when Rome had completed its conquests. From that time forward military activity had neither object nor aliment; and from that time forward, therefore, it declined, so as no longer to disguise that gradual rise of the industrial spirit which had been preparing during the interval. But, notwithstanding this connection, the industrial state was so radically different from the military as to require an intermediate term; and in the same way that, in the spiritual evolution, an intermediate term was required between the theological and the positive spirit. In both cases the middle phase

was fluctuating and equivocal. We shall see hereafter that, in the temporal case, it consisted, first, in a substitution of a defensive for an offensive military organization, and afterwards in an involuntary general subordination, more and more marked, of the military spirit to the instinct of production. This transitory phase being the one in which we live, its proper nature, vague as it is, can be estimated by direct intuition.

Such is the temporal evolution briefly surveyed in its three periods. No philosophical mind can help being struck by the analogy between this indisputable progression and our primary law of succession of the three states of the human mind. But our sociological demonstration requires that we should establish the connection between them by exhibiting the natural affinity which has always existed, first between the theological and the military spirit and afterwards between the scientific and industrial, and, consequently, between the two transient functions of the metaphysicians and the legists. This elucidation will impart the last degree of precision and consistency to my demonstration, and will thus establish it as the rational basis of the entire historical analysis which will follow.

AFFINITY BETWEEN THE THEOLOGICAL AND MILITARY RÉGIME

The occasional rivalry between the theological power and the military, which history presents, has sometimes disguised their radical affinity, even in the eyes of philosophers. But, if we consider, there can be no real rivalry but among the different elements of the same political system, in consequence of that spontaneous emulation which, in all cases of human concurrence, must become more earnest and extensive as the end is more important and indirect, and therefore the means more distinct and independent, without the participation, voluntary or instinctive, being thereby prevented. When two powers equally energetic rise, increase, and decline together, notwithstanding the difference of their natures, we may be assured that they belong to the same *régime*, whatever may be their habitual conflicts. Conflict indicates radical incompatibility only when it takes place between

two elements employed in analogous functions, and when the gradual growth of the one coincides with the continuous decline of the other. As to the present case, it is evident that in any political system there must be an incessant rivalry between the speculative and the active powers, which, through the imperfection of our nature, must often be inclined to ignore their necessary coördination and to disdain the general limits of their reciprocal attributes. Notwithstanding the social affinity between science and industry, we must look for similar conflict between them hereafter, in proportion to the political ascendancy which they will obtain together. We see signs of it already in the intellectual and moral antipathy of science to the natural inferiority of these labors of industry which yet are the means of wealth, and in the instinctive repugnance of industry to the abstraction which characterizes science, and to the just pride by which it is animated.

Having dispatched these objections, we may now contemplate the strong bond which unites the theological and military powers, and which has in all ages been felt and honored by all enlightened men who have borne a part in either, notwithstanding the passions of political rivalry. It is plain that no military system could arise and endure without the countenance of the theological spirit, which must secure for it the complete and permanent subordination essential to its existence. Each period imposes equal exigencies of this sort in its special manner. At the outset, when the narrowness and nearness of the aim required a less absolute submission of mind, social ties were so weak that nothing could have been done but for the religious authority with which military chiefs were naturally invested. In more advanced times the end became so vast and remote, and the participation so indirect, that even long habits of discipline would not have secured the necessary coöperation without the aid of theological convictions occasioning blind and involuntary confidence in military superiors. It was in very ancient times that the military spirit had its great social function to fulfill; and it was in those ancient times that the two powers were usually found concentered in the same chiefs. We must observe also that it was not every spiritual

authority whatever that would have sufficiently suited the foundation and consolidation of military government, which, from its nature, required the concurrence of the theological philosophy, and no other; for instance, though natural philosophy has rendered eminent service in modern times to the art of war, the scientific spirit, which encourages habits of rational discussion, is radically incompatible with the military spirit; and we know that the subjection of their art to the principles of science has always been bitterly deplored by the most distinguished soldiers, on the introduction of every change, as a token of the decline of the military system. On this ground, then, the affinity of temporal military powers for spiritual theological powers is sufficiently accounted for. At the first glance we might suppose the converse relation to be less indispensable, since purely theocratic societies have existed, while an exclusively military one has never been known. But a closer examination will always show the necessity of the military system to consolidate, and yet more to extend, the theological authority, developed in this way by a continual political application, as the sacerdotal instinct has always been well aware. We shall see again that the theological spirit is as hostile to the expansion of industry as the military. Thus the two elements of the primitive political system have not only a radical affinity but also common antipathies and sympathies, as well as general interests; and it must be needless to enlarge further in this place on the sociological principle of the concurrence of these powers, which my historical analysis will present as constantly engaged in consolidating and correcting each other.

AFFINITY BETWEEN THE POSITIVE AND INDUSTRIAL SPIRIT

The latest case of political dualism is even more unquestionable than the earliest, and we are favorably circumstanced for observing it, the two elements not having yet attained their definite ascendancy, though their social development is sufficiently marked. When the time arrives for their political rivalry it may be more difficult than now to exhibit that resemblance in

origin and destination, and that conformity of principles and interests, which could not be seriously disputed as long as their common struggle against the old political system acts as a restraint upon their divergencies. The most remarkable feature that we have to contemplate in their case is the aid which each renders to the political triumph of the other, by seconding its own efforts against its chief antagonist. I have already noticed, in another connection, the secret incompatibility between the scientific spirit and the military. There is the same hostility between the industrial spirit, when sufficiently developed, and the theological. The most zealous advocates of the old *régime* are very far removed from the old religious point of view; but we can transport ourselves to it for a moment, and see how the voluntary modification of phenomena by the rules of human wisdom must thence appear as impious as the rational prevision of them, as both suppose invariable laws, finally irreconcilable with all arbitrary will. According to the rigorous though barbarous logic of the least civilized nations, all human intervention to improve the economy of nature is an injurious attack upon providential government. There is no doubt, in fact, that a strong preponderance of the religious spirit benumbs the industrial by the exaggerated feelings of a stupid optimism, as has been abundantly clear on many decisive occasions. That this disastrous effect has not been more fatal is owing to priestly sagacity, which has so managed this dangerous power as to educe its civilizing influence, while neutralizing its injurious action by constant and vigilant effort, in a way which I shall presently exhibit. We cannot, then, overlook the political influence by which the gradual expansion of human industry must aid the progressive ascendancy of the scientific spirit in its antagonism to the religious, to say nothing of the daily stimulus which industry and science impart to each other, when once strong enough for mutual action. Thus far their office has chiefly been to substitute themselves for the ancient political powers which are yielding up their social influence, and our attention is necessarily drawn chiefly to the aid they have afforded to each other in this operation. But it is easy to perceive what force and what

efficacy must reside in their connection when it shall have assumed the organic character, in which it is at present deficient, and shall proceed to the final reorganization of modern society

INTERMEDIATE RÉGIME

Now that we have examined the two extreme states, the intermediate dualism requires little notice. The interconnection of the convergent powers, spiritual and temporal, which constitutes the transitory *régime*, is a necessary consequence of all that we have been observing. Indeed, we need but look at the labors of metaphysicians and legists to see what their affinity is, amidst their rivalries, — an affinity which bases the philosophical ascendancy of the one class on the political preponderance of the other. We may, then, regard as now complete the necessary explanation required by our fundamental law of human evolution, in order to its direct application to the study of this great phenomenon. That study will be guided by the consideration of the three dualisms which I have established as the only basis of sound historical philosophy. It is worth noticing the conformity of this law of succession, at once intellectual and material, social and political, with the historical order which popular reason has instinctively established, by distinguishing the ancient and the modern world, separated and reunited by the Middle Ages. The sociological law which I have propounded may be found to have for its destination to take up a vague empirical notion, hitherto barren, and render it rational and prolific. I hail this spontaneous coincidence as giving a sanction to my speculative labors; and I claim this confirmation in virtue of that great aphorism of positive philosophy which I have quoted so often, which enjoins upon all sound scientific theories to start from a point sufficiently accordant with the spontaneous indications of popular reason, of which true science is simply a special prolongation.

The series of views of social dynamics sketched out in this chapter has established the fundamental law of human development, and therefore the bases of historical philosophy. It only remains to apply this great sociological principle.

VI

A DEFINITION OF PROGRESS¹

When we reach the plane which man occupies in the animal world, these laws of adaptation, selection, and survival, while they are not altogether superseded, and perhaps operate as powerfully as on the lower creatures, nevertheless become of comparatively small importance in consequence of the vastly more potent influences due to the development of the intellectual faculty which operates according to the indirect method. The progress which man has made, though from any absolute standard it may appear slow and even secular, is nevertheless, as compared to that which is brought about either by cosmical alterations in the environment or by the law of adaptation, or direct and indirect equilibration,² extremely rapid; as much more rapid than that which results from the biological laws just named as this is more rapid than that which results from the cosmical laws. This progress, too, is effected in spite of the frequent disastrous conflagrations which ignorance and error occasion by a perverse use of the Promethean fire.

Biological progress, which consists in increase of structure, must, as before shown, result in increase of pleasure. Anthropological progress, too, which is the result of the conscious pursuit of pleasure, must attain the object of pursuit.

It was shown in the preceding chapter that happiness is both the motive of every particular action and the ultimate end of all action. It follows that there can be no improvement of man's condition unless it tend to secure that end. Human progress may, therefore, be properly defined as that which secures the

¹ From *Dynamic Sociology*, by Lester F. Ward, Vol. II, pp. 173-177, New York, 1898. By permission of D. Appleton & Co.

² Spencer, *Principles of Biology*, Vol. I, chaps. xi and xii.

'increase of human happiness.' Unless it do this, no matter how great a civilization may be, it is not progressive. If a nation rise, and extend its sway over a vast territory, astonishing the world with its power, its culture, and its wealth, this alone does not constitute progress. It must first be shown that its people are happier than they would otherwise have been. If a people be seized with a rage for art, and, in obedience to their impulses or to national decrees, the wealth of that people be laid out in the cultivation of the fine arts, the employment of master artists, the decoration of temples, public and private buildings, and the embellishment of streets and grounds, no matter to what degree of perfection this purpose be carried out, it is not progress unless greater satisfaction be derived therefrom than was sacrificed in the deprivations which such a course must occasion. To be progressive in the true sense, it must work an increase in the sum total of human enjoyment. When we survey the history of civilization, we should keep this truth in view, and not allow ourselves to be dazzled by the splendor of pageantry, the glory of heraldry, or the beauty of art, literature, philosophy, or religion, but should assign to each its true place as measured by this standard.

In considering man's peculiar characteristic as a progressive being, and in how far he really is a progressive being in any other sense than all animals are progressive beings, it will not do to omit the important fact that it is only a part of the human race, and a comparatively small part, that contributes at all to this result. By far the larger part of the race, as it now exists, considered as nations and peoples, are making little or no intellectual progress, but are and have for ages been in a condition in this respect akin to that of animals; while in those nations where civilization is advancing, the great majority contribute absolutely nothing to its advancement, simply performing the functions of animals, viz., those of maintaining their own existence and perpetuating their kind; a very few, the mental and material investigators of things, originate every progressive institution. It is to these few only that all artificial progress in society is due.

It is claimed by some that, if we accept this definition of progress, viz., the increase of human happiness, it will follow that there has never been any progress at all. For they say that civilization, as it has existed among nations, has not had the effect to increase happiness, but rather to diminish it; that the happiest condition in which mankind can exist is that primitive, unconventional state which precedes all efforts at civilization, and allows nature to take its course; that the humblest peasant, dwelling in his Arcadian retreat, and ignorant of the vicissitudes of life amid the scenes of a high and giddy civilization, is more happy than the nervous pursuer of fortune, fame, or knowledge.¹

It cannot be denied that civilization, by the many false practices which it has introduced, by the facilities which its very complexity affords to the concealment of crime, and by the monstrous systems of corruption which fashion, caste, and conventionality are enabled to shelter, is the direct means of rendering many individuals miserable in the extreme; but these are the necessary incidents to its struggles to advance under the dominion of natural forces alone.

It would involve a great fallacy to deduce from this the conclusion that civilization begets misery or reduces the happiness of mankind. Against this gross but popular mistake may be cited the principle before introduced, which is unanimously accepted by biologists, that an organism is perfect in proportion as its organs are numerous and varied. This is because the more organs there are the greater is the capacity for enjoyment. For this enjoyment is quantitative as well as qualitative, and the greater the number of faculties the greater is the possible enjoyment derivable from their normal exercise. To say that primitive man is happier than enlightened man, is equivalent to saying that an oyster or a polyp enjoys more than an eagle or an antelope.

¹ Jean Jacques Rousseau and other writers have maintained this view, and it is so strongly defended by one of the characters of Disraeli's *Lothair* as to justify a suspicion that it was the view of the author. Fénelon (*Télémaque*, Liv. VIII), in the account that Adoam gives of the inhabitants of Bætica, reflects the same sentiment with great force and clearness. See also Comte, *Philosophie Positive*, Vol. IV, pp. 60, 239.

This could be true only on the ground that the latter, in consequence of their sensitive organisms, suffer more than they enjoy ; but if to be happy is to escape from all feeling, then it were better to be stones or clods, and destitute of conscious sensibility. If this be the happiness which men should seek, then is the Buddhist in the highest degree consistent when he prays for the promised *Nirvāṇa*, or annihilation. But this is not happiness — it is only the absence of it. For happiness can only be increased by increasing the capacity for feeling, or emotion, and, when this is increased, the capacity for suffering is likewise necessarily increased, and suffering must be endured unless sufficient sagacity accompanies it to prevent this consequence. And that is the truest progress which, while it indefinitely multiplies and increases the facilities for enjoyment, furnishes at the same time the most effective means of preventing discomfort, and, as nearly all suffering is occasioned by the violation of natural laws through ignorance of or error respecting those laws, therefore that is the truest progress which succeeds in overcoming ignorance and error.

Human progress is, therefore, perfectly analogous to that progress which is going on in the world of animal life, since both consist in a multiplication, variation, and refinement of the faculties of enjoyment, and any change in either which does not effect this is not progress. All happiness consists in the gratification of desire. Every faculty experiences a natural want to be exercised, and that want is a desire. The proper exercise of that faculty is the supply of that want and the gratification of that desire. There are two ways, therefore, by which the happiness of a being can be increased : first, by affording the opportunity for exercising existing faculties ; and, second, by the creation of new and additional faculties, and extending these opportunities to the exercise of these also.

By the law of development alluded to, and which is a sort of biological law of supply and demand, the mere presence of these opportunities is all that is required to create the faculties themselves, for this renders the conditions for the existence of such faculties favorable ; and, where the conditions are favorable for

the development of a faculty, that faculty will arise ; when the opportunities for the exercise of a faculty cease, that faculty will itself cease to exist, although the organs through which it was exercised may long persist.¹

This law extends with full force to the social condition of man. Whatever affords an opportunity for the exercise of a new human faculty creates such a faculty, creates a desire for its exercise, and actually gratifies that desire, thus adding to the sum of human happiness. The creation of such opportunities is, then, the origin of progressive action, and it is these same opportunities, increased and refined, that keep that desire in existence, and increase its intensity. Therefore, we may enunciate the principle that progress is in proportion to the opportunities or facilities for exercising the faculties and satisfying desire.

¹ Spencer, *Data of Ethics*, pp. 183-186 and 263 (§§ 67 and 102).

VII

THE EVOLUTION OF SOCIETY¹

The prime factors in social progress are the Community and its Environment. The environment of a community comprises all the circumstances, adjacent or remote, to which the community may be in any way obliged to conform its actions. It comprises not only the climate of the country, its soil, its flora and fauna, its perpendicular elevation, its relation to mountain chains, the length of its coast line, the character of its scenery, and its geographical position with reference to other countries; but it includes also the ideas, feelings, customs, and observances of past times, so far as they are preserved by literature, traditions, or monuments, as well as foreign contemporary manners and opinions, so far as they are known and regarded by the community in question. Thus defined, the environment may be very limited or very extensive. The environment of an Eskimo tribe consists of the physical circumstances of Labrador, of adjoining tribes, of a few traders or travelers, and of the sum total of the traditions received from ancestral Eskimos. These make up the sum of the conditions affecting the social existence of the Eskimos. The environment of the United States, on the other hand, while it comprises the physical conditions of the North American continent, comprises also all contemporary nations with whom we have intercourse, and all the organized tradition—political and ethical, scientific and religious—which we possess in common with all the other communities whose civilization originated in the Roman Empire. The significance of this increase of size and diversity in the environment will be explained presently.

¹ From *Outlines of Cosmic Philosophy*, by John Fiske, Part II, chap. xviii, pp. 197–201 (copyright, 1874, by John Fiske. Copyright, 1902, by Abby M. Fiske, executrix). By permission of Houghton, Mifflin & Co.

Bearing in mind this definition of a social environment, which I believe carries with it its own justification, let us briefly notice the error committed by those writers who would fain interpret all the most important social phenomena as due, solely or chiefly, to physical causes. This is an error frequently committed by physiologists who try their hand at the investigation of social affairs, and who attempt to treat sociology as if it were a mere branch of biology. But this is not the case. As we have seen psychology to be an offshoot from biology, specialized by the introduction of inquiries concerning the relations of the percipient mind to its environment, we must similarly regard sociology as an offshoot from psychology, specialized by the introduction of inquiries concerning the relations of many percipient and emotionally incited minds to each other and to their common environment. As in biogeny, all attempts to discover the law of organic development failed utterly so long as the relations of the organism to physical environing agencies were alone studied, and succeeded only when Mr. Darwin took into account the relations of organisms to each other; so still more inevitably in sociogeny must all our efforts fail so long as we consider merely the physiologic relations of a community to the country in which it dwells, and refuse to recognize the extent to which communities influence each other by means that are purely intellectual or moral. Doubtless the character of the physical environment is of importance, more especially, perhaps, in the earlier stages of civilization. No doubt civilization will first arise, other things equal, in a locality where food and shelter can be obtained with a medium amount of exertion; where nature is neither too niggard nor too lavish in the bestowal of her favors. No doubt there is a physical significance in the fact that civilization began, not in barren Siberia, or in luxuriant Brazil, but in countries like Egypt and Mesopotamia, which were neither so barren as to starve, nor so luxuriant as to spoil, the laborer. No doubt the Greeks owed much to the extent of their coast line. No doubt — above all — the Mediterranean is justly sacred to the student of history as partly the civilizer of the peoples who upon its waves first courted adventure, and conducted commerce, and imparted

to each other cosmopolitan sympathies which could never have been evoked but for some such intercourse. All this may be granted. But as civilization advances, the organized experience of past generations becomes to a greater and greater extent the all-important factor of progress. As Comte expresses it, in one of his profoundest aphorisms, the empire of the dead over the living increases from age to age. If we contemplate, from a lofty historical point of view, the relative importance of the factors in the environment of our United States, I believe we shall be forced to conclude that the victory of the Greeks at Marathon, the conquest of Gaul by Cæsar, the founding of Christianity, the defeat of Attila at Châlons and of the Arabs at Tours, the advent of the Normans in England, the ecclesiastic reforms of Hildebrand, the Crusades, the revolt of Luther, the overthrow of the Spanish Armada, and the achievements of scientific inquirers from Archimedes to Faraday have influenced and are influencing our social condition to a far greater extent than the direction of the Rocky Mountains, or the position of the Great Lakes, or the course of the Gulf Stream. Or if we inquire why the Spaniards are still so superstitious and bigoted, I believe we shall find little enlightenment in the fact that Spain is peculiarly subject to earthquakes, but much enlightenment in the fact that for eight centuries Spain was the arena of a life-and-death struggle between orthodox Christians and Moorish unbelievers.

The environment in our problem must, therefore, not only include psychical as well as physical factors, but the former are immeasurably the more important factors, and as civilization advances their relative importance steadily increases. Bearing in mind these preliminary explanations, let us now address ourselves to the problem of social evolution, applying to the solution of it sundry biological principles established in previous chapters. We have first to observe that it is a corollary from the law of use and disuse, and the kindred biologic laws which sum up the processes of direct and indirect equilibration, that the fundamental characteristic of social progress is *the continuous weakening of selfishness and the continuous strengthening of sympathy*. Or—to use a more convenient and somewhat

more accurate expression suggested by Comte — it is a gradual supplanting of *egoism* by *altruism*. . . .

¹In the first place, the evolution of society, no less than the evolution of life, conforms to that universal law of evolution discovered by Mr. Spencer, and illustrated at length in earlier chapters. The brief survey just taken shows us that social progress consists primarily in the integration of small and simple communities into larger communities that are of higher and higher orders of composition, and in the more and more complete subordination of the psychical forces which tend to maintain isolation to the psychical forces which tend to maintain aggregation. In these respects the prime features of social progress are the prime features of evolution in general.

In the second place, the progress of society exhibits those secondary features of differentiation and integration which evolution universally exhibits. The advance from indefinite homogeneity to definite heterogeneity in structure and function is a leading characteristic of social progress. On considering primitive societies we find them affected by no causes of heterogeneity except those resulting from the establishment of the various family relationships. As Sir Henry Maine has shown, in early times the family and not the individual was the social unit. In the absence of anything like national or even civic organization, each family chief was a monarch in miniature, uniting in his own person the functions of king, priest, judge, and parliament; yet he was scarcely less a digger and hewer than his subject children, wives, and brethren. Commercially, it is needless to say, all primitive communities are homogeneous. In any barbarous tribe the number of different employments is very limited, and such as there are may be undertaken indiscriminately by every one. Every man is his own butcher and baker, his own tailor and carpenter, his own smith, and his own weapon maker. Now the progress of such a society toward a civilized condition begins with the differentiation and integration of productive occupations. That each specialization of labor entails increased efficiency of

¹ From *Outlines of Cosmic Philosophy*, pp. 209-211.

production, which reacting brings out still greater specialization, is known to every tyro in political economy. Nor is it less obvious that, with the advance of civilization, labor has been steadily increasing in coherent heterogeneity, not only with regard to its division among different sets of mutually dependent laborers but also with regard to its processes and even its instruments. The distinguishing characteristic of modern machinery, as compared with the rude tools of the Middle Ages or the clumsy apparatus of the ancients, is its definite heterogeneity. The contrast between the steam engine of to-day and the pulleys, screws, and levers of a thousand years ago assures us that the growing complexity of the objects which labor aims at is paralleled by the growing complexity of the modes of attaining them. Turning to government, we see that by differentiation in the primeval community some families acquired supreme power, while others sank, though in different degrees, to the rank of subjects. The integration of allied families into tribes, and of adjacent tribes into nations, as well as that kind of integration exhibited at a later date in the closely knit diplomatic interrelations of different countries, are marked steps in social progress. Next may be mentioned the differentiation of the governing power into the civil and the ecclesiastical, while by the side of these ceremonial government grows up insensibly as a third power, regulating the minor details of social intercourse none the less potently because not embodied in statutes and edicts. Comparing the priests and augurs of antiquity with the dignitaries of the mediæval Church, the much greater heterogeneity of the latter system becomes manifest. Civil government likewise has become differentiated into executive, legislative, and judicial. Executive government has been divided into many branches, and diversely in different nations. A comparison of the Athenian popular government with the representative systems of the present day shows that the legislative function has no more than any of the others preserved its original homogeneity; while the contrast between the *Aula Regis* of the Norman kings and the courts of common law, equity, and admiralty, — county courts, queen's courts, state courts, and federal courts, — which are

lineally descended from it, tells us the same story concerning the judicial power. Nor should it be forgotten that the steady expansion of legal systems, to meet the exigencies which civilization renders daily more complex, is an advance from relatively indefinite homogeneity to relatively definite heterogeneity. . . .

¹ Now the historic survey into which we were led a moment ago, while inquiring into the progress of moral feelings, showed us that, in this respect also, the evolution of society agrees with the evolution of life in general. The progress of a community, as of an organism, is a process of *adaptation*,—a continuous establishment of inner relations in conformity to outer relations. If we contemplate material civilization under its widest aspect, we discover its legitimate aim to be the attainment and maintenance of an equilibrium between the wants of men and the outward means of satisfying them. And while approaching this goal society is ever acquiring in its economic structure both greater heterogeneity and greater specialization. It is not only that agriculture, manufactures, commerce, legislation, the acts of the ruler, the judge, and the physician, have since ancient times grown immeasurably multiform, both in their processes and in their appliances; but it is also that this specialization has resulted in the greatly increased ability of society to adapt itself to the emergencies by which it is ever beset. The history of scientific progress is in like manner the history of an advance from a less complete toward a more complete correspondence between the order of our conceptions and the order of phenomena. Truth—the end of all honest and successful research—is attained when subjective relations are adjusted to objective relations. And what is the consummation of moral progress but the thorough adaptation of the desires of each individual to the requirements arising from the coexistent desires of all neighboring individuals? Thus the phenomena of social and of organic progress are seen to correspond to a degree not contemplated by those thinkers who, from Plato to Hobbes, have instituted a comparison between them. The dominant characteristics of all life are those in which social and individual life agree.

¹ Outlines of Cosmic Philosophy, pp. 212-213.

VIII

THE TRANSITION FROM A PAIN ECONOMY TO A PLEASURE ECONOMY¹

Before proceeding further in the discussion of the social forces the distinction between a pain and a pleasure economy must again be emphasized. Beings in a pain economy have vigorous motor powers but a low development of the sensory powers. As they pass from one environment to another the requisites for survival are determined by the enemies and pains to be avoided. Food and pleasure are of course necessary, but they are not the main objects of conscious thought. When such beings have developed their sensory powers far enough so that forms of thought and ideals are created which aid them in their activities, there is formed for them a pain society, the end of which is protection from enemies. There is a pain morality, the purpose of which is to keep persons from committing acts and putting themselves in situations which lead to destruction. There is also a pain religion, the purpose of which is to invoke the aid of higher beings in the ever-recurring contests with enemies and pain.

In describing the leading features of a pain economy, I do not mean to imply that men in such an economy are constantly thinking of pain and never of pleasure, but that all their institutions have as their basis the fear of enemies and pain. The primitive state is formed, as Hobbes tells us, to secure protection from enemies. The primitive morality is some form of asceticism. When enemies abound the conscious pursuit of pleasure exposes a being to the attacks of these enemies and the consequent evils. The choosing of smaller instead of greater pleasures and the postponement of pleasures until the ends demanded for

¹ From *The Theory of Social Forces*, by Simon N. Patten, chap. iv (copyright, 1896, by American Academy of Political and Social Science, Philadelphia).

protection and security are obtained become the best means of prolonging existence. By the aid of these social forces in a pain economy many of the highest ideals of men have been formed. Connected with these ideals is a series of impulses which prompts individuals to activities in harmony with the conditions under which they have grown up. The most fundamental characteristics of the human race belong in this realm, and to the average individual they seem to be the only bulwarks by which society, morality, and religion can be defended. Yet we are now in the transition stage from this pain economy to a pleasure economy, and it is necessary to see what changes will ensue and in what way ideals, forms of thought, and impulses must be modified to meet the new conditions.

The causes of a pain economy lie in the environment. Vigorous enemies deal out death and destruction so freely that the thought of isolated individuals is concentrated on the causes and remedies for pain. The development of human society has gradually eliminated from the environment the sources of pain. The civilized world has been freed from dangerous beasts and reptiles, and the growth of large nations has cut off the danger of invasion by barbarous and warlike human foes. The objective environment is now merely the crust of the earth and its stock of materials and goods. The sensory powers have free play in analyzing this material into its elements, and in reorganizing these elements into valuable goods. These changes make a pleasure economy possible and destroy the conditions which made the subjective environment of the old pain economy a necessity.

It is not, however, to be assumed that the transition to a pleasure economy is an easy one. On the contrary, it is a most difficult process and one fraught with many evils and dangers. So many of the fundamental ideas, ideals, and impulses of the race lose their efficiency through the change that mankind seems almost without a rudder to guide it through its new difficulties. Historical evidence would seem to prove that a pure pleasure economy is an impossibility. Nation after nation has gone down when utilities instead of pains have become the supreme object of interest. Individuals as well as nations show the deteriorating

influence of pleasure as soon as they are freed from the restraints of a pain economy. This tendency to deterioration, however, is an evil that belongs only to the period of transition. A nation, after undergoing the severe discipline of an unfavorable environment, suddenly finds itself transferred to a new environment where there is an abundance of utilities and no fear of enemies. The old safeguards to character are now inadequate, and it takes a long time to construct a new series of safeguards suited to the new conditions. In the meanwhile individuals sink into a state of lethargy or of vice, and the nation is so weakened that some new people, coming from a region where a pain economy still prevails, find it an easy conquest.

Consequently in those regions where a pleasure economy is possible nation after nation has risen and fallen, without ever developing sufficient strength to resist the encroachments of enemies disciplined by a pain economy. A pleasure economy cannot be formed by any kind of a revolutionary process. There must be a long period of transition in which the leading elements of the old economy are gradually lost, and in their places the ideas, ideals, and impulses of a pleasure economy are substituted. The development of modern nations has been along this path. Without a conscious departure from the old ideals of state, morality, and religion, there has been a gradual substitution of certain ideals and impulses of a pleasure economy, until now all of our leading concepts are held in a dual form. One group of ideals and impulses is the conservator of past conditions, while blended with them is another group of ideals and impulses which is the outcome of the new conditions. Such a state of affairs cannot but be the cause of much confusion and distress. The only hope of progress lies in separating the present aggregate of forces into their elements and in finding to which group each ideal and impulse really belongs.

The present situation can, perhaps, be better described by returning to an elementary distinction. It has been shown that progress is due to the passing from one environment to another, each having certain requisites for survival. The purpose of individuals in passing from environment to environment is not

progress, but an escape from competition. The easiest way out of present difficulties is taken even though some other path in the long run would better serve the ends of the race. The line of least resistance often forces progress to take a circuitous route, as when a river cutting its way to the sea often makes long curves to traverse a short distance because of some obstacle in the direct route.

When the race entered a pain economy it was forced out of the direct line of social progress into a series of environments where the requisites for survival warded off pain instead of promoting welfare. The early instincts, customs, ideals, and religious forms of the race were at bottom safeguards from enemies and pains. In time, however, the conditions of a pain economy became less severe and some of the requisites for survival came from a pleasure economy. The line of progress then tended to come back to its normal trend, and now after a long detour the race finds itself at a point on the normal line somewhat in advance of the point of departure. The environment no longer demands a pain economy, yet the instincts, habits, and ideals of the race have been acquired during this long period of abnormal progress, and there are no proper guides for activity in the new pleasure economy into which the race is admitted.

To put itself into a normal condition, the race must construct an artificial channel from the point where it left the normal line of progress to the point where it now is. It must create with design the same impulses, habits, and ideals which it would have had if the normal line of progress had not been abandoned. The abnormal impulses and ideals of the pain economy must be discarded or reconstructed on a new basis. This necessity involves an enormous undertaking, for the abnormal course of events reaches back far beyond the organization of men into societies.

It is often assumed that this reorganization is an easy one to beings who have the faculty of reason to guide them. If reason were that independent source of authority which many metaphysicians hold it to be, something might be hoped for from it. But reason acts only on the impulses that lie back of it, and they are the slow accumulations of many ages. Doubtless a conscious

progress can save the race from many evils and economize much time, but it cannot alter the order of development nor eliminate any of its steps. Nations cannot become fitted for the conditions of a pleasure economy without passing through a stage of progress where the elementary ideas and impulses are adjusted to one another by the crudest form of evolution. We are repeating this early process at present with a great loss of life and happiness. Individuals brought suddenly into a pleasure economy fail to react against their environment, yield to temptation, and sink into vice. The new impulses and ideals appear but slowly, yet perhaps we are far enough along to see something of their character and influence. As I have said, they are already a part of our present stock of ideas. The new, however, is so blended with the old that it is hard to isolate them. Perhaps our religious ideals show the effect of the transition from a pain to a pleasure economy more plainly than any others. The concept of God possessed by primitive races is but little separated from their concept of earthly rulers. They serve him as they serve their rulers, from fear of the consequences of disobedience. It is a rule of fear tempered with a hope of protection from enemies. With a clearer perception of spatial relations their concept of God removes him farther from the sphere of earthly rulers, but he is still thought of as a God of war and an avenger of evil deeds. When the development of the sensory powers has progressed far enough to create a concept of natural law and of the universe, God is thought of as the creator of men and is supposed to use his power and foresight to ward off the evils which come from natural forces. When men advance far enough to see that a natural retribution does not follow evil deeds in this life, God becomes the final judge of the deeds of men. So far there has been a development of the ideas of a pain economy due to changes in the sensory powers of men. Force, power, and omniscience are the leading characteristics of the ideal of God.

At length, however, a new thought appears in the form of the Christ ideal. Christ is not the God of war and hate, but the God of peace and love. He comes not as the ruler of men but as their servant. He has so little power that a corporal's guard can

crucify him. With the appearance of Christ there was brought into the world a new group of religious ideas quite foreign to those previously entertained. The old ideals were fitted for men whose foes were external and from which they needed a protector. A God of power who was an avenger of evil deeds was a fitting ideal for men in such a condition. But when men are transferred to a pleasure world their evils are internal. They are their own foes. They want relief not from persecution but from temptation. The concepts of a powerful God and of a future retribution are of little help to men in such a situation. They want rather a model for imitation, one who remains pure even though subject to the passions and temptations of men. The likeness to man is emphasized in the Christ ideal more than the likeness to God. He is a better ideal because he is powerless and helpless.

IX

WAR AND ECONOMICS IN HISTORY AND IN THEORY¹

Each generation must write its own history of past events, in order to interpret them in terms corresponding to its needs. New conditions give rise to new problems, and these to new conceptions; and when we turn again to examine the past, we put to it questions never before asked. Since the middle of the century, when the victory of parliamentary government in western Europe was finally assured, — without, however, accomplishing the marvelous results expected of it, — the question as to the best form of government has come to have mainly an academic interest, while the contests of actual politics have more and more turned upon questions of social and economic policy. This shifting of the center of interest has been followed by a corresponding change in the character of historical writing, culminating in the rise of the new school² in which political constitutions are considered as results rather than causes, and attention is devoted chiefly to the economic factor in history. Such a change in the point of view must necessarily alter the perspective of history, giving more prominence to such phenomena as have an important bearing on economic development.

That war belongs to this category seems altogether beyond dispute. If it be true that all great events are due in large part to economic causes, and react in turn upon economic conditions,

¹ Edward VanDyke Robinson, *Political Science Quarterly*, Vol. XV, pp. 581-622.

² Represented in different ways by men so unlike, yet having so much in common, as Schmoller, Lamprecht, Ashley, Bücher, Loria, and Rabbeno. Cf. Lamprecht's *Alte und neue Richtungen in der Geschichtswissenschaft*, and the admirable review entitled "Features of the New History," by Earle Wilbur Dow, in the *American Historical Review* for April, 1898.

then surely it will no longer suffice to dismiss this subject with the customary lamentations about the horrors and waste of war, nor even with some more or less probable estimates of the cost of particular wars. The time has certainly come when an investigation is needed, to show, if possible, the relation of war as an institution to the economic conditions prevailing in the several stages of civilization.

I

Among tribes subsisting on the products furnished spontaneously by nature, war is the normal condition. The reason is, in the main, economic. The scarcity and precariousness of the food supply render much land necessary to support each family. Unless climatic conditions absolutely prevent an increase of population, the hunting grounds of the several tribes are of necessity extended until they overlap; and so arises a war of extermination, whose issue is the destruction of the least efficient social organization and the restoration of the equilibrium between population and food supply. At this stage of economic development war is not only a business enterprise but the only conceivable business enterprise, — the only means by which a vigorous tribe may procure for itself an increased food supply. Nevertheless, a victorious tribe cannot expand without breaking up into smaller tribes, for the economic condition forbids men to dwell in large groups. This state of things thus tends to perpetuate itself. Individual tribes may rise or fall, but the old way of life goes on unchanged. How, then, does civilization ever emerge from this vicious circle?

This is a question not yet satisfactorily answered, though M. Tarde's imitation theory, and the culture myths of all races which have learned the secret of an artificial food supply, would indicate that individual initiative played a leading part in the great transformation. But the most brilliant genius could do no more than apply to the satisfaction of an existing need something contained in or suggested by his environment. And it is characteristic of human nature not to try a new plan until the old one has utterly failed. What, then, were the circumstances which resulted in the creation of an artificial food supply?

It is evident that before this could happen the natural food supply must have proved insufficient, and the usual remedy in such cases, war, must have failed to bring relief. At first glance both these conditions would appear to exist among tribes worsted in battle, and one is tempted to think he has discovered another of the uses of adversity. But in savage warfare the defeated party is seldom left with any surplus population; and, even when their numbers again increase or the tribe is forced back into a less productive country, the creation of an artificial food supply is effectually hindered by their inability to defend themselves or their possessions. Instead of seeking to increase their resources, they set about limiting the increase of population by a systematic extension of the practices of infanticide and "senicide," which exist among all savages but reach their fullest development among tribes unable to make head against their neighbors. It is not, therefore, among the conquered that the origin of the new industrial system must be sought; nor yet among the conquerors, if they have been able by conquest adequately to supply their needs. It is rather among tribes whose equality of strength or inaccessible location prevents a decisive victory that the creation of an artificial food supply becomes a necessity and hence a fact; and the same rule holds good concerning most of the subsequent steps in economic progress. In other words, industrial development is the result of strenuous competition, of which war is the most acute form.

Whether the next stage shall be pastoral or agricultural depends on the environment. In an open country, where there are animals suitable for domestication, the tribe will become pastoral; without such animals, or in a broken forest land, it becomes agricultural. Other things being equal, the change to pastoral life is the more easy and natural. The food supply obtainable from a given area being greatly increased, the population is multiplied in like proportion. And whereas the hunting existence scatters the population, the pastoral life tends to greater concentration through the need of mutual protection for the herds, and to social and political consolidation through the development of a patriarchal organization. For this reason, while

hunting tribes are limited to guerrilla warfare, the numbers, discipline, mobility, and readily transported food supply of pastoral peoples enable them to undertake distant expeditions and to make conquests on a grand scale. These things are, moreover, forced upon them by the economic limitations inherent in their mode of life. War is eventually as much an economic necessity for pastoral as for hunting tribes. Population depends upon herds, and herds upon accessible pasturage. But, owing to the rapid increase of population due to the greater regularity and comfort of their life as compared with hunting tribes, the limit of safety is soon passed. In this condition the least failure of pasturage, from drought or other cause, drives them forth into distant lands with the suddenness and violence of a tidal wave. This is the explanation of the periodically recurring *Völkerwanderungen* which have swept over the earth, destroying and founding empires.

When hemmed in by impassable barriers or invincible enemies, pastoral tribes, under the pressure of an increasing population, slowly become agricultural. The latter case was illustrated in the Germans beyond the Roman lines; of the former, examples may be found in Egypt, Chaldea, China, Peru, and Mexico, which early became centers of agriculture less because of their natural fertility — since in most of them irrigation was necessary — than because of their inaccessibility. They were so fenced about by mountains and deserts that the inhabitants were thrown back on their own resources to maintain the increasing population. Moreover, for the same reason, they were largely protected against hostile raids during the early period of agricultural development, when the people, scattered upon the land, fall an easy prey to every marauder.

Inaccessibility would thus appear to be as advantageous for the origin of a civilization based on agriculture as accessibility is for its continued development. Nevertheless, even in the most sheltered lands, the necessity of self-defense finally leads to division of labor and to social differentiation. A temporary form of this division was the arrangement found among the Suevi, by which the men alternately tilled the land and went out to war.

The next step is the development of a permanent military class. The system of castes is an economic necessity at the stage of development when the family is the only possible school of practical arts. It is equally "an inevitable incident accompanying a certain stage of military expansion." And it is likewise the result of conquest which produces slaves and subjects to be exploited for the benefit of the ruling race, — a result whereof Sparta is the classical example. All three causes were operative in antiquity, especially in the Oriental world. The great empires which flourished there all rested on a more or less clearly defined system of castes; and in all of them conquest was not only the origin but also the chief end of the state. Under the circumstances no other object was possible; for the lack of scientific knowledge and the rigidity of the social system narrowly limited the division of labor and rendered not only agriculture but even manufacturing relatively unproductive. It was inevitable, therefore, that the natural increase of population should cause the law of decreasing returns to be keenly felt. Where should relief be sought if not in conquest, — in the booty and tribute of subject peoples? To this all nations instinctively turned.

It is not less true, therefore, of agricultural than of shepherd nations, that war ultimately becomes an economic necessity. For the time comes when foreign lands must be drawn upon to feed the people, and, in the absence of international division of labor, the only possible means to this end is war. The development of commerce on a grand scale and the use of a money economy do not remove all the causes tending to war; but they open up the possibility — barring commercial rivalries — of a peaceful expansion. And this was neither possible nor conceivable in a natural economy such as characterized the Orient. This fact alone explains the predominant rôle of conquest in the ancient world.¹

II

In passing from the Oriental nations to Greece we obtain a glimpse into a condition of things infinitely more primitive.

¹ Cunningham, *Western Civilization in its Economic Aspects*, pp. 13, 14, 24-38.

Here we find in its beginnings the economic, social, and political development which in Asia and Africa had reached maturity when history opens. The Greek states reproduce in miniature before our very eyes the process of development and decay which underlay the great movements of ancient history. For this reason they reveal with the greatest clearness the fundamental relations of industry and war.

The early Greeks, like the Ætolians of a later day, were a rude race — half pastoral, half agricultural, and still partially nomadic — who waged war ceaselessly for herds, slaves, and fertile lands. War was for them strictly a business enterprise ; or, as Goethe puts it :

Krieg, Handel und Piraterie
Dreieinig sind sie, nicht zu trennen.

War existed, as it were, by nature ; while peace required to be established by special treaty. This is seen in the *ἀσυλία*, — that is, exemption from spoliation, — which was granted only as a special favor. It is seen even more strikingly in the fact that in Homer piracy is a distinctly honorable calling, — the only one, in fact, which a thorough gentleman may follow. The wrath of Achilles grows out of a question of booty. Agamemnon constantly prays that he may “plunder the well-built city of Priam.” And the Trojan war as a whole is evidently a piratical expedition of Greek vikings. Moreover, through all the changes of advancing civilization, war, and even private war, continued in the eyes of the people to constitute an honorable mode of acquisition. Innumerable phrases and proverbs scattered through Greek literature show that war was conceived not only as the natural condition between all men but also as the source of wealth and honor, and even as the creative principle in the universe.¹

These facts, which usually furnish the text of a sermon on Greek morality, are, in a broad sense, as much facts of nature,

¹ Iliad, III, 69-74. Od., IX, 39-42; XIV, 210-234, 258-272. Hymn to Apollo, 452 *et seq.* Thucy., I, 1-21; V, 105. Pindar, Frag. 151. Plato, Laws, 625, 626. Especially striking is the fragment of Herakleitos: πόλεμος πάντων μὲν πατήρ ἐστι, πάντων δὲ βασιλεὺς, καὶ τοὺς μὲν θεοὺς ἔδειξε, τοὺς δὲ ἀνθρώπους, τοὺς μὲν δούλους ἐποίησε, τοὺς δὲ ἐλευθέρους (Apud Mullachium, Frag. phil. graec., I, 320). Cf. Arist., Eth. Nicom., VIII, 2. Plut. de Isid. et Osir., cap. 48.

and as little suited to be the subject of ethical judgment, as a tornado or an earthquake. The task of science is to understand, not to judge. And it is precisely such facts as these which furnish the indispensable clew. Greek history is "simple and complete," because it is dominated almost exclusively by a single cause. The Greek states, in their brilliance, their turbulence, and their swift decay, reveal with surprising clearness the characteristics of limited political areas, in which the question of land or space is necessarily fundamental. From the beginning to the end of their history every important economic, military, and political movement originated in the effort to find support for a redundant population. The Dorian conquest was the work of a poor and hardy tribe whose native mountains no longer afforded it sustenance, and which therefore went forth to seek with the sword its fortune in distant lands. The Greek colonies arose from the same motives, partly through plundering raids which ended, like those of the Northmen, in conquest and settlement, partly through peaceful emigration. The later wars, both foreign and domestic, were due to the same cause, namely, the struggle for land and food. Even the growth of commerce and the introduction of a money economy, while altering the superficial aspects of the struggle, did not remove, but rather intensified, this incessant and deadly competition. It divided Greece into two parties, — the one continental, agricultural, military, which clung to the natural economy and followed the lead of Sparta; the other maritime, commercial, naval, which speedily adopted a money economy and fell largely under the control of Athens after her transformation from a continental to a maritime state. That Sparta remained aristocratic, while Athens became democratic, was a result rather than a cause. The contrast and the hostility between the two states and the interests which they represented lay deeper than forms of government; it was rooted in their very mode of life. It was the irrepressible conflict between a natural and a money economy, — the old struggle for existence in a new form. The abiding hostility of the subject cities toward Athens, and of the social parties at Athens toward each other, bears witness to the same irreconcilable conflict of interests.

Confronted with the necessity of feeding a population greatly in excess of her resources, the Imperial City bent every energy to procure from abroad what nature had denied at home, not only by extending her export trade but also and chiefly by exploiting to the utmost her political position and her command of the sea.¹

The wars of the Hellenistic period were due to the same cause. When the gold and arms of Philip had imposed peace on the warring cities of Greece, he planned the Asiatic campaign primarily in order to provide for the landless men who swarmed in the Greek cities, a constant incitement to piracy and civil war.² For the keen-eyed Greeks with Xenophon had long since made it known to their countrymen that since the Persian empire was so rich and so weak, it was their own fault if they preferred to abide at home in poverty rather than be masters of the Persian wealth. What Xenophon had conceived and Philip had planned, Alexander executed. In his train the Greeks swarmed forth like bees in springtime. Greek cities sprang up on every side as if by magic. Greek merchants, administrators, soldiers, filled the land, carrying their tongue and civilization into the wastes of central Asia and to the very gates of India, acquiring in turn from the fertile East the wealth which their narrow and rocky fatherland denied them. This stream of Greek emigration flowed on unchecked for centuries. The peace which followed at home was due less to the Macedonian control than to the fact that this enormous expansion and emigration had largely dried up the perennial fountain of contention and of war.

Events so important and dramatic could not fail to make a deep impression on a people so open-minded and thoughtful as the Greeks. They were the first explicitly to recognize and state the problem of war, and to make it the subject of scientific investigation. The course of events thus receives additional illustration and interpretation through the development of doctrine.

Among the thinkers whose contributions to the theory of war call for individual mention, the earliest, and in some respects the most remarkable, is Hesiod. His voice was the first to be lifted

¹ Meyer, *Die wirtschaftliche Entwicklung des Alterthums*, pp. 39, 41.

² Isocrates, V, 120.

in protest against the current glorification of war. Himself a peasant, he undoubtedly expressed the views of his class, who suffered most of the losses of war while others reaped its rewards. Almost alone among ancient writers, he sings of labor. In words that have a strangely modern ring he contrasts the fruitful emulation of industry with the destructive rivalry of war. All that the school of Cobden has written on the subject is but an elaboration, often a tedious iteration, of the views here expressed or necessarily implied.¹

The next author to discuss war from the economic standpoint was Thucydides. It would be no exaggeration to call his work "the economic interpretation of Greek history." He shows in detail how the Peloponnesian war resulted from the pressure of an imperious necessity, namely, a large population and poor soil, which rendered Athens as unscrupulous in time of peace as other states were wont to be in war. Hence the continual confiscations at home; hence also the exploitation of their allies and the repeated massacres to make room for Athenian colonists.²

Essentially the same point of view prevails in the early writings of Xenophon.³ In conformity with this opinion he points out the complete dependence of Athenian power and prosperity upon the control of the sea, whereby the island states were delivered helpless into her hands, the continental states were constrained to obey out of regard for their commerce,⁴ and the choicest products of all lands were diverted from those who refused to do her bidding and carried to Athens, which thus lived by the toil of others.⁵ But the long series of wars that brought ruin upon all Greece moved Xenophon, in his last work, to seek some escape from the policy of aggression, considering that "if it were possible for the citizens of Athens to be supported solely from the soil of Attica itself, . . . herein lay . . . the antidote to their own poverty and to the feeling of suspicion with which they are regarded by the rest of Hellas."⁶ After

¹ *Works and Days*, II, 11-26.

² Thucyd., I, 15, 70; II, 13, 38; III, 82; V, 116.

³ *E.g.* *Oecon.*, I, 15.

⁵ *Ibid.*, II, 7, 8, 11. Thucyd., I, 119.

⁴ *Government of Athens*, II, 1-3.

⁶ *Revenues of Athens*, chap. 1.

dwelling upon the sources of profit not yet fully utilized, especially mines and commerce,¹ he shows that peace is an indispensable condition for the full enjoyment of these natural advantages, and calls to mind that Athens was twice installed as chief of the naval confederacy for services to Hellas, and twice overthrown for selfishly misusing her power. And then he adds :

Of all states Athens is preëminently adapted by nature to flourish and wax strong in peace. And while she abides in peace she cannot fail to exercise an attractive force upon all. . . . Again, is any one persuaded that, looking to riches and money making, the state may find war more profitable than peace? . . . Even at the present time we are suffering from its ill effects.²

In this passage the war economy of the ancient world is tried at the bar of reason and experience, and explicitly condemned on economic grounds.

Very similar conclusions are found in Plato, notwithstanding the fact that he is concerned to know, not whether war or peace is the more profitable, but which is the more favorable to the true life, the attainment of virtue. Regarding the soul, and all pertaining thereto, as infinitely superior to the body, he naturally determines the worth of all things by their relation to these parts of men. By this criterion, accordingly, he measures war. In the Republic he shows in detail how war arises inevitably from the increase of population and the consequent competition of neighboring states for land.³ From this it follows that, considered as an occupation, war, as also trade and hunting, is

unproductive or acquisitive — since none of these produces anything, but is only engaged in conquering, by word or deed, or in preventing others from conquering, things which exist and have been already produced.⁴

This analysis of war leads inevitably to its rejection as the end of state activity. For this reason, in spite of the fact that his

¹ Revenues of Athens, chaps. 2, 3. Memor., II, 7.

² Revenues, chap. 5.

³ Rep., II, 372, 373; VIII, 547, 548. Phædo, 66.

⁴ Sophist, secs. 219, 222. Laws, sec. 823.

own ideal state is modeled on the Dorian institutions of Sparta and Crete, Plato severely condemns these states for their devotion to war, — a condemnation which must have astonished his contemporaries, who saw in these states the fullest realization of the universal ideal, not less than it does the Spartan and Cretan interlocutors in the dialogue. His conclusion is that

war, whether external or civil, is not the best, and the need of either is to be deprecated, but peace with one another and good will are best. . . . No one can be a true statesman, whether he aims at the happiness of the individual or the state, who looks only or first of all to external welfare; nor will he ever be a sound legislator who orders peace for the sake of war, and not war for the sake of peace.¹

Nevertheless, idealist though he is, and filled with a fine scorn of the military virtues, Plato does not dream of abolishing war. On the contrary, he clearly perceives that the least aggressive of states would still need protection, and he recognizes a decay of the military spirit as a symptom and cause of national decadence.²

Aristotle reaffirms in the main, and further develops, the doctrines of Plato. His criterion is the same, namely, the true life, the attainment of virtue. In the spirit of Plato's distinction between Greek and barbarian he justifies slavery, and also war for the acquisition of slaves, on the ground that "animate instruments are quite as necessary as inanimate," and that barbarians are intended by nature for slavery. Such a war he classes as a species of hunting, which is itself a part of the art of acquisition (*κτητική*). But while thus classifying and justifying war as a mode of acquisition, Aristotle emphasizes, even more than Plato, that it is only a means to an end, and that to sacrifice the end to the means, as is done in states organized solely for war, is the height of absurdity. And he closes his condemnation of the prevalent war economy with words whose profound wisdom the world has been slow to fathom.

Facts as well as arguments prove that the legislator should direct all his military and other measures to the provision of leisure and the

¹ Laws, I, 625, 626, 628, 630, 638; VII, 803, 829; VIII, 829.

² Statesman, 307. Rep., V, 470; VIII, 547, 548, 551.

establishment of peace. For most of the military states are safe only while they are at war, but fall when they have acquired their empire. . . . First of all, men should provide against their own enslavement, and, in the second place, obtain empire for the good of the governed.¹

It was only yesterday that Mr. Kidd interpreted to an astonished world, still under the spell of Cobden, what this last clause really means. But unfortunately, owing to Aristotle's prepossessions in favor of the primitive or "natural" mode of life and his prejudices against the division of labor and a money economy (*χρηματιστική*), which he considers "contrary to nature," he is led to condemn those industries which, not being subject to the law of decreasing returns, have largely released the modern world from the bondage to nature and the resulting pressure of imperious necessity that formerly rendered war perpetual. And for the same reasons he opposes the taking of interest, without which production obviously cannot be conducted on a scale large enough to bring into operation the law of increasing returns. Here, then, is the weak point in his system. He criticises Plato's proposal to maintain a stationary population through communism; he disparages the artificial industries which have, as he says, "power of indefinite expansion"; he fails to suggest any other means of equalizing production and population; and yet he condemns war. As well forbid the oak to heave up the soil or burst asunder the stones that impede its slow but mighty growth.

III

The Romans were originally a pastoral people, and as such necessarily dependent on war to enlarge their pasture lands. The same condition confronted them during and after their transition to agriculture. War was, therefore, the normal condition; peace, the exception. *Beati possidentes* was a favorite legal maxim. In the words of Gaius, "Maxime sua esse credebant quae ex hostibus cepissent." Even after the transition to a money economy, marked by the social crisis in the fifth and fourth centuries,² the policy of conquest underwent no change.

¹ Pol., I, 3-6, 8, 9; II, 9; VII, 2, 14, 15.

² Meyer, *op. cit.*, p. 24.

The first reason was the inland location of the city, which prevented commerce on a large scale and thus made war the only possible form of national expansion. The second and perhaps no less important reason was the force of habit, the power of tradition. The Romans were descended, so they believed, from the war god, and all the roots of their history were entwined with war. How should they tear themselves loose from their past, love what they had despised, and despise what they had loved? "The commercial nations must work for us," they said. "Our business is to conquer them and levy contributions on them. Let us then continue war, which has rendered us their masters, rather than give ourselves to commerce, which has made them our slaves." Vergil's *debellare superbos* has the true Roman ring; so also have the words of Cicero, when he holds commerce disgraceful and declares, "Rei militaris virtus praestat ceteris omnibus: haec nomen populo Romano, haec huic urbi aeternam gloriam peperit." His defense of conquest and of discrimination against the provinces breathes the same spirit.

At a later date, it is true, there was a slight reaction from these views, which remained, however, without practical effect. Cicero was moved by the authority of Plato and Aristotle to an inconsistent and half-hearted expression of peaceful sentiments.¹ The Stoics discarded the doctrine of a natural distinction between masters and slaves, thus leaving no theoretical justification for slavery. Seneca even has a violent polemic against conquest, as sentimental as St. Pierre.² With the dissolution of all social and national ties, and the growth of extreme philosophical individualism, the idea of universal peace made its appearance, arising, no doubt, from the legend of the golden age. Strabo discusses it and concludes that a permanent "balance of power" is prerequisite. Probus, attempting somewhat prematurely to dispense with an army, fell a victim to this ideal. But social corruption resulted, as in the time of Rousseau, in a passionate longing for an ideal "state of nature"; and this, reënforcing the current prejudice in favor of a natural and against a money economy,

¹ De Off., I, 11, 81.

² Diog. Laert., VII, 1, 122. Epict., II, 8. Seneca, Ad Luc., sec. 47.

effectually prevented any analysis of the real causes of economic decay. Pliny, who had pointed out the most striking symptom of disease,¹ nevertheless failed to get at the root of the matter; instead, he was carried away by the prevailing sentimentality of his age. Expressing the thought common to all his contemporaries, he interpreted literally Vergil's *auri sacra fames*, described each step in the manufacture of money, from the mining to the stamping of the metal, as a *scelus*, the cause of all evils and crimes, and finally exclaimed, "Quantum feliciore aevo, quum res ipsae permutabantur inter se."

Economic conditions and national traditions thus combined to foster the policy of conquest and exploitation. Its success exceeded the wildest dreams of avarice. Well could the Roman poet sing, "Now Rome is golden, since she possesses the mighty treasure of the conquered world."² All roads led to Rome; and all roads were but channels for the booty and tribute of the provinces. Millions of the conquered became slaves, who toiled for individual masters. Those who retained their liberty and property were none the less slaves, who toiled for a collective master, the Roman people. The provincials Cicero describes as "*in servitudine nati*"; the provinces, as "*praedia populi Romani*" and "*nervi rei publicae*." They paid tribute in money, in grain, in soldiers; they equipped the fleet, clothed and fed the army; they gave contributions in a thousand forms; finally, stripped of money and of property, they borrowed back from the Roman capitalists, at fabulous interest, a portion of what they had paid as taxes.³ The exploitation of the provinces, which began when the Roman armies returned laden with booty and when the best lands were declared public property, thus continued in a variety of forms after their submission, and grew more relentless with every passing year. However pursued, it was a part of the Roman *jus belli infinitum: ubi jus belli, ibi jus usurae*.

In Rome, therefore, the ideal of conquest was realized and embodied in unrivaled completeness and splendor. To unlimited

¹ Hist. Nat., XVIII, 7.

² Ovid, Halieut., ll. 7, 8.

³ Bruder, "Zur oekon. Charakteristik des röm. Rechts," *Zeitschrift für die ges. Staatswissenschaft*, XXXII, 629-635.

power was added fullness of time in which to demonstrate, once for all, what are the fruits of a war economy, — how he fares who eats his bread in the sweat of another's face. The long death agony of the Roman Empire, the hopeless decay, the inevitable end, over which Gibbon's stately style has shed a melancholy splendor, and for which so many profound reasons have been given, had, after all, a very simple and prosaic cause, — *consumption exceeded production*.¹

This condition was due to two chief causes. The first was the system of slave labor. As our own experience shows, such a system is of necessity unproductive. It demands great estates, few and simple crops, extensive cultivation, and abundance of fresh land. At best it creates but a slight surplus over the cost of maintenance; and when fresh land is no longer available, so that intensive cultivation becomes necessary, it speedily ceases to create any surplus. It was the knowledge of this fact that spurred on the Southern leaders in the United States to extend slave territory; it was the operation of this law that, after Roman conquests ceased, transformed *servi* into *coloni*. In the meantime, so long as it exists, the slave system tends to destroy, or to prevent the growth of, a middle class and a free laboring class. There is no economic place in society for them. They stand outside the division of labor. Population is stationary, or even decreases; the natural resources of the country are not developed; capital plays little part in the process of production. While land and wealth fall into fewer and fewer hands, and a few colossal fortunes strike the eye, society as a whole grows constantly poorer, because only a part of the people work, and they only under compulsion. Truer words were never spoken than these of Pliny: "*Latifundia perdidere Italiam, jam vero et provincias.*"

The second cause for the excess of consumption over production was the absence of industry at Rome. Her trade was merely "to crush grain and men." This reduced commerce to the importation of tribute in kind or of goods bought with tribute

¹ Roscher, *Ansichten*, p. 44. Kautz, *Nationaloek.*, I, 144, 148.

money.¹ In consequence, the automatic character of normal commercial and financial relations was wanting, and there was a constant and increasing discrepancy between national production and national consumption. This made itself felt in several ways. On the one hand, the provinces, which paid over so large a portion of their annual produce, were impoverished and ruined; on the other hand, the Italians suffered the same fate through the forced competition of colonial produce. Thus the production of wealth steadily and rapidly decreased, both in Italy and the provinces; while at the same time the unproductive consumption of wealth grew apace through the largesses of corn, the increasing centralization of administration, and the multiplication of capitals, courts, and officials. Moreover, since there was no export, except of money, there was a constant flow of precious metals to the Orient, beyond the frontiers, in payment for imported luxuries. The consequence was a "money famine" of the most serious and far-reaching character. As prices fell the payment of taxes became more and more difficult, and finally impossible, at the very time when the fiscal needs of the empire were rising by leaps and bounds. The Roman world was convulsed. The money economy, which had formed the basis for imperial administration, collapsed; the ancient natural economy reappeared. Tribute was increasingly paid in kind. Soldiers and officials received grants of land in lieu of salaries. Change of occupation became practically impossible. Society crystallized into a regular system of castes.² Feudalism was in process of development. But all in vain. The economic disease of which the empire was perishing had eaten too deeply into its vitals. Moreover, the cause still remained; consumption still exceeded production. The provinces were desolate, the people starving, the army scattered and broken, and the barbarians were at the gates. Need we wonder that they were received with open arms? Rome

¹ Pliny, Hist. Nat., XII, 18. Tac., Ann., III, 53. H. von Scheel, "Die wirtschaft. Grundbegriffe in Corpus Juris Civilis," in the *Jahrbuch für Nationalök.*, 1866, pp. 324, 329-335. Mengotti, Memoria sul commercio dei Romani: "I Romani non ebbero altro commercio che quello di trasportare in Italia tutte le ricchezze . . . del mondo conquistato."

² Bruder, XXXIII, 695.

was a huge economic parasite, which had wound her tentacles about the provinces, sucking out their lifeblood, until in destroying them she necessarily destroyed herself and sank lifeless in a desert of her own creation.

Among the northern barbarians we find a condition of things still more primitive than in the Homeric age or the reign of Romulus. What the Gauls of Brennus and the Goths of Alaric were, that the Greeks and Romans had been when Athens and Rome were places without a name. War was universally conceived by them as the natural condition of man, existing *per se*, and constituting the most honorable source of gain. A Gallic chieftain first uttered that cry which became the Roman motto: *Vae victis*. And of the Gauls Cicero reports, "Galli turpe esse ducunt frumentum manu quaerere, itaque armati alienos agros demetunt." The Germans were, if possible, still more warlike, and avowed with naive directness the purpose of conquest and exploitation which the Romans of that day had learned to cloak with plausible pretexts.¹ The cause for such opinions and practices was not human depravity but economic necessity. For example, the Suevi, who, as Cæsar states, "lived very little on grain, principally on milk and flesh," waged ceaseless warfare to keep the country unoccupied for great distances in all directions, simply because without such pasture lands their herds and they themselves would perish. It was a question not of vainglory, as Cæsar seems to intimate, but of self-preservation. The same thing is true of the great Celtic and Germanic migrations. The motive was not love of wandering nor lust of fighting; it was hunger.² When the land, as men understood how to use it, could no longer sustain the people, they were confronted with the grim alternative which, in some form, has stared the human race in the face at every stage of barbarism and of civilization, namely, migration—that is, war—or starvation. Sometimes they had recourse to the ancient Aryan custom, known also to Greece and Italy, called the *Ver Sacrum*. Youths chosen with

¹ Cæsar, *De Bello Gallico*, I, 36, 44; IV, 3. Tac., *Ger.*, XIV. Livy, V, 36.

² Arnold, *Deut. Urzeit*, pp. 251–260. Lamprecht, *Deut. Gesch.*, "Die Völkerwanderungen." Von Ihering, *Evolution of the Aryan*, pp. 159, 259, 383, 384.

religious rites would go forth, a band of Ishmaelites, to find new homes or to perish, as the fortune of war decided. Sometimes, when hard pressed, the entire nation would join the migration. It was thus that the Gauls under Brennus, and the Cimbri and Teutones, entered the Roman Empire, having arms in their hands, but with the prayer for land constantly upon their lips. Let the Roman people grant them land, and they would be faithful allies. It was the same with the Helvetii and the Usipites and Tencteri, who matched their strength in vain against Cæsar's legions. And it was the same with the Marcomanni and with the invaders who finally overran the western provinces.

IV

The later wars of the Middle Ages, after the close of the *Völkerwanderungen*, may be divided into four classes: (1) defensive wars, against new invaders; (2) feudal or territorial wars; (3) the Crusades; (4) commercial wars.

Defensive wars originated in the attempt of tribes in less fertile lands to thrust themselves into the place occupied by the conquerors in the old Roman provinces, and to appropriate the revenues derived from the subject population.¹ Notwithstanding local successes, such as those of the Northmen on the Atlantic, the Arabs on the south, and the Magyars and Turks on the east, these invasions were, on the whole, unsuccessful, and ceased altogether as soon as the industrial development in Europe had produced such a division of labor, and consequently such a social and political organization, as to give the defenders unquestioned military superiority. This organization was found first in feudalism and later in centralized states and standing armies based on a money economy. In both cases, however, while the foundation was economic, the active cause was military. The invaders were baffled, in the end, by the organization which their own assaults had called into existence. This was the case with the Arabs in Spain and France, the Danes in England, the Huns and Magyars in Germany.

¹ Molinari, *Grandeur et décadence de la guerre*, pp. 42-48, 63.

Feudalism is the system in which a standing army, quartered on the tillers of the soil, is intrusted with the defense and administration of the country. War and government are both private undertakings. For a purely agricultural population, with a natural economy, there is no other solution of the problem. The peasants, scattered and occupied on the land, cannot be utilized for war; nor can soldiers or officials be paid except by grants of land. This explains the recurrence of feudalism in ages and countries so remote from each other as to preclude the possibility of imitation; for example, China, Japan, Assyria, Persia, Egypt, Abyssinia, Mexico, Peru. Moreover, feudalism is at once the result and the cause of war. As Laurent says: "*La guerre est son unique occupation, c'est sa fonction social. . . . Chaque baron avait le droit de guerroyer, et il en usait, comme aujourd'hui tout individu emploie ses facultés dans le travail.*" Land being the only source of wealth, the only form of business enterprise was to acquire more land. To do this there were only two means, — marriage and war. Both were, therefore, pursued as systematically as any form of industrial enterprise is to-day. But a marriage involving landed interests almost invariably began or ended in war, — a fact of which Austrian history affords striking examples, in spite of the well-known couplet commending Venus above Mars.¹ At bottom, therefore, the one form of business undertaking was war. It enriched the feudal lords through lands and serfs; it enriched their knights and retainers through booty and ransom. A war with France was long esteemed the only method by which an English gentleman could become rich. Throughout the Middle Ages, therefore, the military classes everywhere held fast to the ancient German belief in the rightfulness of acquiring wealth by force of arms, — a belief clearly and tersely expressed in the Westphalian proverb:

Rüthen und Roven dat is gheine Schandh',
Dat dohn de Besten im ganzen Land.

The division of booty became finally a regular system of dividends yielding a large annual interest on the capital invested in military

¹ *Bella gerant alii, tu felix Austria nube,
Quae dat Mars aliis, dat tibi regna Venus.*

pestilence and war, the population of Europe had already reached a point where the law of decreasing returns began to inflict hardship. The younger son, who remained a social problem and danger for the next five centuries, and later played so notable a part in the conquest and colonization of the New World, had already made his appearance. Where land was entailed, and no wilderness remained in which to carve out new estates, he was driven forth to seek a livelihood by his sword. Where subdivision had been practiced holdings had grown so small that the revenues no longer supported the feudal tenants in their accustomed mode of life, whence arose oppression of the peasants, who were impoverished to make good the deficiency; but in spite of this many of the feudal lords had fallen hopelessly in debt. From all these causes there resulted a dangerous social ferment and unrest; landless and impoverished men of every class stood ready for any undertaking, however desperate, that promised relief from their misery. To all such the Crusades seemed indeed a call from heaven. But when experience showed that the difficulties were greater and the rewards less than had been supposed, the crusading zeal flagged, and it became necessary to offer greater and greater bounties, not only spiritual but also and especially material in character. Finally, as Molinari acutely remarks: "*Lorsque l'expérience eut démontré que les croisades ne payaient pas — on y renonça et les guerres d'expansion des peuples de l'Europe ne recommencèrent qu'après la découverte de l'Amérique.*"¹

The last class of mediæval wars, namely, the commercial, were intimately connected with, and in part a continuation of, the Crusades. The Italians had regarded the conquest of the Orient as a commercial venture; the Venetians utilized the Fourth Crusade to establish their commercial monopoly at Constantinople. From this arose prolonged and desperate wars, especially between Genoa and Venice, whose common object was the advancement of their own commerce through the destruction of a dangerous competitor. But such wars did not originate at that time, nor were they confined to Italy. No one can read

¹ Grandeur, etc., p. 49.

Machiavelli's History of Florence or the early chronicles of any mediæval city without perceiving that commercial rivalry shaped their whole policy. The history of the intricate and incessant wars between Pisa and Florence, which Guicciardini narrates at such appalling length, is merely an illustration of what went on all over Europe, especially in Italy, Germany, and the Low Countries, where commercial interests were strongest. In fact, the history of the commercial cities from the eleventh to the fifteenth century reveals, on a small scale, all the features which have characterized the history of commercial nations from the fifteenth to the nineteenth century. The one all-important difference is that, by a wider division of labor and greater activity of the central government, the economic unit has grown from the city state to the national state.

V

As the Middle Ages drew to a close and the spread of a money economy enabled rulers to replace feudal levies with standing armies, wars seemed to increase in magnitude and destructiveness. The task on which men labored was that of nation making, and nations are seldom born except on the field of battle. The existing conditions, social as well as political, all tended to war. The population, turned back from the East by the failure of the Crusades and the advance of the Turks, became increasingly congested. The social ferment and unrest which had preceded the Crusades was again abroad. Every land was filled with "sturdy beggars," whom the laws and the gibbet were powerless to control. The younger son was again a menace to social and political security. When Columbus happened upon America while seeking a new route to the Indies, these conditions facilitated the speedy conquest and permanent colonization of the New World. But the relief thus afforded was not sufficient: the social pressure precipitated the wars of national expansion, which began in Italy two years after the voyage of Columbus and continued, with short intermissions, for three centuries. And political theories faithfully reflected existing conditions. Machiavelli, Bacon, Raleigh, Grotius, Hobbes, Bossuet, Spinoza, Pascal, — all

held that war was conformable to the first principles of nature. However they differed in other respects, all publicists agreed in considering the state as an economic unit whose interests were to be advanced, as occasion offered, by commerce, tariffs, and arms.¹ In other words, they held the mercantile theory. That this contained certain false ideas no one would deny, but the mercantile theory was nevertheless the only one suitable for the age.

In the tremendous struggle that was to decide which of the peoples should have room to grow, and thus in the end to part "the living from the dying nations," there were four periods. The first was marked by the Italian wars from 1495 to 1559; the second, by the so-called religious wars from 1559 to 1648; the third, by the series of contests between the maritime powers from 1648 to 1763, — contests "carried on without truce or intermission among tropical islands and on strange seas, for colonies, commerce, and the balance of power"; the fourth, by the Napoleonic wars, which Professor Sloane has shown to have been a continuation of the same contest.² And now, after nearly a century of comparative peace, we have recently seen the beginning of another, or fifth, epoch of strenuous international competition for commerce and colonies.

The Italian wars resulted from a conflict not merely of royal ambitions but also of national interests. Nominally territorial in object, they were at bottom largely commercial. Italy was rich, divided, and weak, — a condition sure to invite foreign interference. France was filled with that dream of Oriental commerce and dominion which is her heritage from the Crusades, and to this end control of Italy and the Italian fleets was prerequisite. And Charles V waged war in Italy not by arms alone but by tariffs; not merely in support of his claims as emperor and as king of Spain, but also, and perhaps chiefly, as the ruler and representative of the Low Countries, who saw in the Italian cities their most dangerous competitors.

It was not otherwise with the religious wars. Sweden fought that she might control the Baltic. France aided Protestants in

¹ Naude, *Die Getreidehandel-Politik der europäischen Staaten*, Berlin, 1896.

² "The Continental System," *Political Science Quarterly*, Vol. XIII, p. 212.

order to weaken the Hapsburgs. The German princes changed sides as interest dictated. Holland grew rich from the plunder and commerce of her foes. Schmoller even declares, "The heroic struggle of the Dutch displays itself, when looked at in a dry light, as a century-long war for the conquest of East Indian colonies, and an equally long privateering assault on the silver fleets of Spain and the Spanish-American colonial trade." This reasoning applies with even more force to the English wars of the period. The Elizabethan sea kings combined religion, politics, and business with a keen eye for the main chance. And Cromwell, who inherited their spirit and plans, had, like them, a twofold quarrel with Spain. "On the side of Mammon he covets Spanish treasure. On the side of God he is opposing Antichrist."¹

Out of the religious wars, therefore, grew the national commercial wars which filled the last half of the seventeenth century and all of the eighteenth century. They all arose from one and the same cause,—the effort to maintain or to break down a monopoly of trade. At first, since Spain claimed and energetically enforced a monopoly of the New World, the other maritime powers made common cause against her. This was especially true in the West Indies, where the buccaneers—English, French, and Dutch—went trading or fighting as occasion offered; privateers in war, pirates in times of nominal peace, but always with the sympathy and support of their compatriots in the colonies, and always, whatever their disagreements, the sworn enemies of Spain. They furnish, indeed, a most interesting example of the survival upon the sea of that ancient belief in the rightfulness of private warfare which rendered piracy almost as respectable a calling, in the days of Drake and Morgan, as it had been in the time of Odysseus or Rollo of Normandy. By 1650, however, the Spanish sea power was broken; and Cromwell, who secured in Jamaica the naval base indispensable for English operations in the Caribbean Sea, at once threw down the gage of battle to Holland, then mistress of the seas.² For the Dutch, having

¹ Egerton, *Short History of British Colonial Policy*, p. 65, London, 1897.

² Seeley, *Expansion of England*, pp. 146-148.

ousted the Portuguese and Spaniards in the East Indies, had adopted and even extended the restrictive and violent measures whereby their predecessors had destroyed the Arabic commerce.

But this duel with Holland was soon overshadowed by the growing industrial and commercial preponderance of France, which forced England and Holland to unite for self-preservation. This occurred first in 1668, when the Triple Alliance checked the conquests of Louis XIV in the Netherlands. In the War of the Palatinate (1689-1697) the English and Dutch again fought side by side against the common foe; and at La Hogue their fleets wrested from France the mastery of the sea. In the War of the Spanish Succession (1702-1713) the same struggle was continued, to the decided advantage of England, who obtained Gibraltar and portions of Canada and the West Indies. In addition she acquired valuable commercial rights in Portugal by the Methuen Treaty, and in the Spanish colonies by the famous Assiento Contract, whereby a legal, although limited, right of participation was granted in the lucrative Spanish-American trade. This war was undoubtedly a "commercial success" so far as England was concerned. So greatly was commerce stimulated that the wildest speculation ensued, culminating in the South Sea Bubble, which burst in 1721. In spite of this, however, commerce and industry continued to expand. But in 1733 France and Spain concluded a family compact whereby the latter bound herself to transfer to France the share in the Spanish-American trade then held by England under the Assiento Contract, and both pledged themselves to oppose England's commercial and colonial expansion. This compact led to war with Spain (1739-1748), which merged into the War of the Austrian Succession. The war was waged in America, India, Europe, and on every sea. The treaty of Aix-la-Chapelle restored English rights under the Assiento Contract and confirmed her possession of Acadia; but it settled none of the questions which had produced the war. It was therefore a truce, not a peace; and fighting was soon resumed in America over the control of the Ohio valley, without a formal declaration of war. The fundamental issue in the Seven Years' War (1756-1763) was "whether maritime and commercial supremacy

for the next hundred or two hundred years should belong to England or France." The success of England was decisive. Spain and Holland had long since fallen behind; now France, the last of her rivals, was stripped of colonial dominions.

The English trade grew by leaps and bounds. The enormous demand for manufactures stimulated the genius of her artisans and produced the era of great inventions, which in turn revolutionized the industry of the world and established England's supremacy for a century to come. So far did she distance all possible competition through these new methods that she could safely discard and disown the very means by which she had attained this supremacy. This fact is the economic foundation of the free-trade doctrine which Adam Smith proclaimed, and which henceforth became increasingly popular; but for half a century more the mercantilist tradition retained its ascendancy in the councils of state. The thirteen colonies were driven to revolt in large part by the pressure of this economic system; which they had outgrown; for while they had previously prospered under the system of mutual monopoly, they now found that, with increase of numbers, the market of the home country no longer absorbed their surplus products at a profitable price. The War of the Revolution had, therefore, the same origin as the other colonial wars of the two preceding centuries. England fought to retain her monopoly, the colonists to break it, and France and Spain to destroy the British Empire. It was this purpose that dictated their secret proposal to England that the colonists be confined between the mountains and the sea. And it was the same purpose which caused the intrigues of France with the discontented Western settlers, through citizen Genet and others, aiming to win them to French allegiance and thereby to recover the Mississippi valley. Nor did this purpose cease to animate French policy until the Louisiana Purchase. That England also continued long to cherish the same hope is shown by her retention of the Western forts. The War of 1812 really formed the closing episode of the Revolution.¹

¹ Rives, "Spain and the United States in 1795," *American Historical Review*, Vol. IV, p. 62.

The wars of the French Revolution began, as all the world knows, in a conflict of democracy and monarchy. But other and more material reasons lurked in the background from the start; and as time passed these became more and more prominent. The Girondists precipitated the first war in order to fortify their own position by gratifying the traditional French craving for conquest. England was drawn into the contest because the French conquests menaced her commerce. And under Napoleon the war became a duel between England and France for the commercial empire of the world. This is the reason why Napoleon undertook the campaign in Egypt and Syria and planned with the czar an attack on India. For the same reason he instituted the Continental System for the destruction of English trade, while England retaliated with the Orders in Council, designed to crush French industry. For the same reason both parties plundered American commerce, whose growth filled them with envy and alarm. The final victory of England was due to the fact that the great inventions called forth by her commercial opportunities, which in turn resulted from success in previous wars, had given her such a start in industry that her colonies lately in revolt bought more from her after the Revolution than ever before, that Europe could not dispense with her products, and that even Napoleon himself was forced to connive at smuggling of English goods in order to supply his army. And her victory in war left England in a position of industrial and commercial supremacy which has enabled her to feed her growing population abundantly while the millions of the Continent hungered, and to maintain her position as the first of European nations against all comers.

VI

War for commerce thus culminated in the conflict which centers about Napoleon, but it did not altogether cease with his fall. It is true that in continental Europe a new coloring was given to most of the wars which followed through the development of the sentiment of nationality. But this was itself conditioned by economic changes consequent upon the belated development of

national economies out of the smaller economic units. The most powerful cause in the consolidation of Germany and Italy was thus the same which led to the transformation of the United States from a league of states into a federal state, namely, the pressure of economic interests as embodied in commerce. This motive appears even more clearly in the invasion of Algiers (1830); the Crimean War, waged by England in defense of the route to India; the Chinese wars (1857-1860); and, finally, in the invasion of Mexico (1861-1867). The leading objects of this undertaking, as defined by Napoleon III in a letter to the French commander, were:

(1) To place obstacles in the way of the absorption of this part of Mexico by the United States, and (2) to prevent the Anglo-Saxon federation from becoming the sole medium and the sole mart for the commodities and the commerce of the North American continent.¹

But these commercial wars of the nineteenth century are scattered and trivial episodes compared with those of the preceding century. After the overthrow of Napoleon, as Schmoller points out, "another spirit begins to make its way in commercial policy and in international morality." The sources of this change were two,—political events and philosophic doctrines. The revolt of the American colonies, English and Spanish, was a staggering blow to the old colonial system. And the increase of commerce between the United States and England after their separation convinced men that the old system had been from the start the creation of supreme folly, defeating the end it was intended to serve. On the other hand, "ideas of a humane cosmopolitanism began to instill into men the thought of a change of policy in the economic struggles of European states at the very time when the international rivalry had reached its highest point."² These ideas were in part, perhaps in the main, merely an application to politics of the philosophical individualism of the *Aufklärung*; in part, also, they were the offspring of a distinct theoretic movement, hostile to war, which had gathered momentum for several

¹ Quoted in Gallaudet's *International Law*, p. 94.

² Schmoller, p. 79.

centuries past. During the Middle Ages, when the military spirit first mastered the church, Emmerich de la Croix wrote a remarkable work in which, for the first time since the advent of Christianity, peace was advocated on economic grounds. From that time until recent years, amidst the wars and rumors of wars, there has been an unbroken succession of peace advocates. Since the partisans of the established order in church and state had undertaken the defense of war, these advocates of peace have naturally appeared, for the most part, among dissident sects and parties.¹ It was Dante, the exiled Ghibelline, who first gave worthy expression to the ideal of universal peace through a universal monarchy. A contemporary of Dante, Marsilius of Padua, at heart a republican and a Protestant, ably seconded Dante's appeal. Toward the end of the same century Wyclif in England and Raoul de Presles in France assailed the military spirit, especially in the church. The latter denied the rightfulness of all aggression, expressly condemning the Crusaders on this ground, and concluding, "Bella geramus ut pacem habeamus; esto ergo bellando pacificus." But it remained for Erasmus, with all the power of his genius, to sum up the ethical and religious objections to war in a passionate invective and appeal which has always remained the arsenal of the peace party. Unfortunately, as in most works of its class, the appeal is mainly, if not exclusively, to the feelings.

A century later the same idea, with more emphasis on the economic side, was taken up by Sully, who drew up a plan for "la paix perpétuelle de l'Europe." If he is to be credited, Henry IV really intended to anticipate the czar in calling a peace conference, — after he should have rearranged boundaries according to his own ideas. Tommaso Campanella, who reveals the plan of the imperialists in the Thirty Years' War, expected universal peace under a universal Spanish monarchy after all heretics should have been exterminated. William Penn, in his Plan for the Peace of Europe, makes a serious and well-considered

¹ For example, the Christians in ancient times, and more recently the Vaudois, Lollards, Anabaptists, Mennonites, Quakers, and Philippones. Such of the reformed sects as became state churches immediately took up the defense of war. Cf. Luther, Ob Kriegsleute auch in seligem Stande seyn künden, and Art. 16 of the Augsburg Confession. The same principle applies to political parties.

argument for peace, based chiefly on the economic damage caused by war. The Abbé de Saint-Pierre, who derived his ideas from Sully and through him from Erasmus and Emmerij de la Croix, published in 1713 an intolerably diffuse and sentimental *Projet de paix perpétuelle*, providing for a grand alliance, to prevent war by mediation. The combined effect of the ruinous wars just ended, the individualistic philosophy of the *Aufklärung*, and the sentimentality of the age gave this work quite a vogue. Its influence may be traced in Swift's bitter satires and also in those of Voltaire, in spite of his mocking verse concerning the worthy abbé. Rousseau was also deeply influenced, as may be seen in his *Extrait du projet de M. l'Abbé de Saint-Pierre*, in the *Contrat Social*, and in the fragment entitled *Que l'état de guerre naît de l'état social*.

Montesquieu, while justifying war and conquest, argued that the relative equality of nations had rendered them unprofitable. Necker embodied in his report on the finances of France an eloquent argument against war, largely from the economic standpoint. Our own Franklin reproduced the same ideas. Jeremy Bentham wrote a *Plan for a Universal and Perpetual Peace*, advocating disarmament and a court of arbitration whose moral influence should sway nations. His chief reliance in moderating the belligerent spirit natural to man was the freedom of the press.

Mirabeau, on the eve of the French Revolution, saw near at hand the era of universal peace, and Condorcet repeated the same prophecy, with even more assurance, after the war had begun. Kant, approaching the subject from the side of character, maintained, on the contrary, that war developed the qualities which made for culture, while prolonged peace enervated and debased men.¹ This argument has been frequently repeated and amplified by men who have had little in common, except that they approached the question from the ethical or social rather than the economic side.² But five years later, in the midst of the great war (1795), Kant wrote another and more famous work, —

¹ *Kritik der Urtheilskraft*, 1790.

² So W. von Humboldt, Hegel, Maistre, Cousin, De Quincey, Lasson, Proudhon, Ruskin, Von Treitschke, Funck-Brentano, Strauss, Jähns, Bradley, Von Ammon, Mahan.

Zum ewigen Frieden, — in which he cast about for means of arresting war, and found it in that which he had formerly despised, namely, commerce. In the state of nature war was the normal condition; but organized society, he held, tends to peace. The mechanical course of nature, he affirms, "visibly exhibits a design to bring forth concord out of the discord of men, even against their will. This is effected by the commercial spirit, which cannot exist along with war, and which sooner or later controls every people." Through this work Kant became the father of a spiritual progeny of quite another character, including most of the peace propagandists during the last century.

The spread of this peace theory has been powerfully aided by the prevalent philosophical doctrines. The adhesion of the economists, in particular, was secured on this ground. Theology had given way to metaphysics. The Deity reigned, but he did not rule. Nature, with a capital N, was now the active ruler of the universe. Nature was good; to doubt it was to doubt the goodness of God. Man, on the contrary, was bad, having been corrupted by society. To the Physiocrats, as to Rousseau, everything was perfect as it came from the hand of Nature; man alone was the inventor of evil. There was a preordained natural harmony in the universe, — a harmony that man could ruin by his meddling, but was powerless to alter or improve upon.¹ War, being an effort of man to control the natural course of events, was a disturbance of this natural harmony; wherefore the conclusion was clear, — *laissez faire, laissez aller*. This was the faith which passed with that famous phrase into classical economy. The conclusions implied in the theory of Adam Smith were drawn with logical rigor by his successors;² such as Bastiat in his *Harmonies Économiques*, the Philosophical Radicals, the Manchester School of Cobden, Bright, and their latter-day followers, whom Cossa calls the "Optimists."³

¹ Ritchie, *Darwinism and Politics*, p. 6; *Natural Rights*, p. 45.

² Clarke, "Defects of the Old Radicalism," *Political Science Quarterly*, Vol. XIV, pp. 69, 84, 85. Rogers, Cobden and Modern Political Opinion, 1873. Ritchie, *Darwinism and Politics*, pp. 8, 19.

³ For example, Laveleye, Molinari, Rogers, Sumner, Goldwin Smith, Godkin, Leroy-Beaulieu, Novicow, Ferri, Jean de Bloch.

But in a progressive condition of society all philosophical doctrines are in a state of unstable equilibrium; and it was not long before this natural-harmony theory of the universe began to totter. In the first place, experience soon proved that the supposed identity between the interest of the individual and the interest of society at large is not nearly so complete as had been assumed. It was this discovery that led John Stuart Mill to depart farther and farther from the orthodox economic creed. Then the demonstrated fact of evolution tended to end the old dualism of man and nature by absorbing man in nature. It no longer sufficed to explain war as a human interference with the harmony of nature; and this not alone because the analogy of warfare with the struggle for existence in other species was too obvious to be mistaken, but because, if man is a part of nature and subject to natural laws, it is a logical absurdity to speak of him as disturbing the harmony of nature. It therefore became necessary to regard war as a natural process, instead of a human interference with the beneficent designs of nature. In order to do this, and at the same time maintain the traditional view that war has no place in the world, as now constituted, recourse was had to the theory that competition in war, as a form of the struggle for existence, is destined to be succeeded by competition in industry. This is the point made by Mr. Spencer and Mr. Kidd in their distinction between the military and industrial types of society. But events have most perversely refused, despite all the exhortations and lamentations and Jeremiads of Mr. Spencer and his followers, to move in the course marked out for them. The individual has become progressively less prominent in the realm of production and more prominent in that of consumption; while state activity, in place of decreasing, as required by Mr. Spencer's formula, has gone on increasing. The era of stateless competition of all individuals in one world economy, which Cobden believed at hand, seems farther from realization than ever. Even the biological analogy which Mr. Spencer so extensively exploited has turned against him, tending rather to show that increasing centralization, in place of decentralization, characterizes higher organisms, and consequently that the type of society which he

regards as the higher is in reality the lower. Finally, in addition to the silent crumbling away of the philosophical foundations of the cosmopolitan theory, and its breakdown on a matter of such capital importance as the relation of the state to industry, has come its total discredit through the ascertained falsity of its economic assumptions. It was assumed (1) that England was destined to be the workshop of the world ; (2) that free trade was to solve the economic (or social) problem ; (3) that the world was soon to adopt the unrestricted exchange of products ; (4) that the era of perpetual peace was close at hand, —all of which, being necessary inferences from the accepted doctrine of economic harmonies, as formulated by Bastiat, were formerly thought above discussion, but now are held beneath it.¹

VII

Once more, therefore, the relation of industry and war has become an open question, nor is a final answer probable in a world where *πάντα πέι*. But it can scarcely fail to throw some light on the matter, if we observe wherein each theory has been found wanting.

The fundamental error in the mercantile theory was the belief so tersely expressed by Montaigne : *Il ne se fait aucun profit qu'au dommage d'autrui*.² From this was derived the maxim attributed to Machiavelli, and consistently acted upon for centuries by all governments, as it still is by horse traders, according to Mr. David Harum, — *quod tibi fieri non vis, id alteri tu primus feceris*. The existence of any community of economic interest between nations was not merely denied ; it was not even suspected. That the policy dictated by such a theory was grasping and merciless goes without saying. That incalculable injury was inflicted upon the weaker party to every transaction was a result unavoidable under the theory. But that the stronger party suffered eventually even more than the weaker was the greatest of all possible surprises and disappointments ; for herein were revealed the fatal error of the theory and the doom of the whole

¹ Clarke, *op. cit.*, Vol. XIV, pp. 84, 85.

² *Essais*, I, 21.

system of statecraft based thereon. While all the nations pursued this policy for a season, it was in Spain and Portugal, and to a lesser degree in France, that it was followed out to the bitter end. The entire fabric of their colonial empires was reared on this foundation, because, being first on the scene, they naturally occupied the regions where returns could be most quickly obtained, and also because in them the Roman instinct of conquest and exploitation was strongest. The traditions of Sulla and of Verres awoke to life in their conquistadors and viceroys; by no other nation since the Romans has war been so openly and exclusively conceived as a business undertaking. The Spanish conquests were conterminous with the regions occupied by agricultural tribes, not alone because of the difficulty of subduing the nomads of the mountains, jungles, or deserts, but also and chiefly because, even if subdued, such peoples could be made neither to work nor to pay taxes. In the conquered districts the Spaniards imposed themselves as a ruling class. They exploited the natives through the system of *repartimientos*; the king and his favorites exploited them through exorbitant taxes, enormous salaries, universal bribery, and blackmail. Exclusion, prohibition, monopoly, were the very lifeblood of the system; small wonder that the Spanish ambassador replied to Cromwell, seeking freedom of religion and of trade, that "the Inquisition and the monopoly of trade were his master's two eyes." They who will not learn must perish and make room for others wiser and stronger than they, — such is the law of life. The white colonists, broken under a tyranny even more galling than they inflicted on the natives, declined in numbers, mingling their blood with the colored population, and lost the abounding energy and spirit of the conquistadors. There was no incentive to labor merely for the enrichment of greedy officials. Thus the flag of Portugal or Spain speedily came to signify a land of poverty, dirt, and *mañana*.

Meantime how fared it with the home countries? Receiving the enormous riches of the New World and the Old, envied by all nations as the favorites of fortune, they grew steadily poorer and sank into hopeless decay at the very time that Holland and England were growing to astonishing dimensions in riches and power.

Strange enigma? Incomprehensible working of Providence? Not at all. The Spaniard reaped many fields which he had never sown; but this crop was of his own planting. The colonies were impoverished by taxes and extortions; the home country was impoverished by the resulting decay of industry. The wealth of Mexico, Peru, and the Indies flowed away to other lands where wealth was produced for exchange, leaving Spain poorer by many lives and many millions, and above all poorer in the senseless pride and contempt of labor begotten of her apparent wealth. The empire of Spain has perished, the empires of Turkey, Portugal, and France are perishing, of the same disease to which the Roman Empire succumbed: consumption exceeds production. Were Lord Bacon now on earth, he would doubtless revise his essay "Of Greatness of Kingdoms and Estates," wherein he cites the Romans, Turks, and Spaniards as examples of greatness due to the pursuit of arms. They are examples, indeed, which it behooves men deeply to consider,—above all, in France, Germany, and the United States,—examples which show most impressively how they thrive who would live by the labor of others, but not examples apt to provoke imitation.

The doctrine of mutual gain in commerce was promulgated by Adam Smith in the same year which saw the American Declaration of Independence. Within fifteen years after the Peace of Paris the volume of British trade with the revolted colonies had doubled.¹ So signal a vindication of the new theory destroyed at one blow the whole fabric of the time-honored mercantile system. The movement thus inaugurated continued to gain momentum for a century. Unquestionably it constituted "one of the greatest advances made by mankind," and tended strongly to humanize the relations of the nations to each other. But it is equally unquestionable that this theory overshot the mark both in what it assumed and in what it denied. This was evident to clear-sighted men even before the culmination, from 1860 to 1875, of the free-trade and perpetual-peace movement; the last two decades have made its errors so evident that few not

¹ Davidson, "England and her Colonies," *Political Science Quarterly*, Vol. XIV. pp. 39, 40.

hopelessly wedded to their illusions hold the theory in its original unqualified form. Even the Cobden Club at its last meeting felt constrained, in view of the imperiled condition of British trade, formally to recant its peace-at-any-price creed and to advocate a "vigorous" policy in China and elsewhere. Cobden once declared that "no military success is worth so much as the conquest of a new commercial route." It is precisely for the conquest of commercial routes that wars are now chiefly waged.

The fundamental error in the peace and free-trade theory lay in generalizing the particular, — in assuming, without further investigation, that what was true of England at a particular time would be true of England and all other countries at all times. Having acquired, by tariffs and by war, a monopoly of the world's markets, the new inventions which were stimulated by this enormous demand soon placed England beyond the danger of competition. The American Revolution, which destroyed her monopoly of markets, left her still a practical monopoly of the new industrial processes, and so English trade continued to expand. This event, which astounded the world, and England most of all, clearly showed that here the need for state aid and protection no longer existed; the free traders immediately assumed that it never existed. Free trade was now obviously to England's advantage; the free traders assumed that it was to everybody's advantage. England had become the workshop of the world; the free traders assumed that she would always remain the workshop of the world. Yet to-day England remains the only free-trade nation, — remains so because of her urgent need of cheap food and raw materials; and so dangerous has become the economic rivalry of other nations that the general adoption of free trade, whereby they too would secure cheaper food and raw materials, might well work her utter ruin. The fact is, as List clearly perceived, and even orthodox economists¹ now admit, that it may be to the advantage of a nation, by means of tariffs, (1) to resist an industrial change naturally impending or, more frequently, (2) to hasten such a change, because the persons affected could find no other occupation equally profitable, and

¹ Sidgwick, *Elements of Politics*, pp. 289, 290.

the sum total of national production is thereby rendered greater than under the *régime* of free trade. The other nations, especially Germany and the United States, acting on this principle, have built up industries of such magnitude that they are now able to wrest from the English the control of neutral markets. This is the meaning of the fabulous growth of German and American export trade, and the relative and even absolute decline of English trade, during the last decade. The dogma of the natural and necessary harmony of the interests of all nations is just as false as that of their natural and necessary antagonism. This dogma is true only so long as each nation has a natural monopoly in some one line of industry,—as the free traders erroneously assumed that England had in manufacturing. While competition is absent, commerce is, indeed, a bond of peace and good will between those who buy and those who sell in return. But the moment that two nations embark extensively in the same line of industry, that moment commerce becomes a sword, dividing and setting at enmity those who are rivals for the same markets.¹ For of them it is true, as Montaigne declared, that no profit can be made except to the damage of another. The increase of one is the decrease of the other; the prosperity of one is the other's destruction. Such nations stand to each other as two Indian tribes when there is but game enough for one.

VIII

What, then, is the future of war?

The fundamental fact in history is the law of decreasing returns. It is the source of the origin and development of civilization; for without the pressure of population on subsistence man would never have risen above the lowest savagery. It is equally and for the same reason the source of poverty and war. To equalize population and subsistence there are four possible

¹ Cf. *The Federalist*, No. VI. Bernard, "Growth of Laws and Usage of War" (Oxford Essays, 1856, p. 121). Blanqui, pp. 428-433. Gibbins, *Industry in England*, pp. 69, 470-474. Shaler, "Natural History of Warfare," *North American Review*, Vol. CLXII, pp. 337, 338. Dicey, "War and Progress," *Eclectic Magazine*, 1867. Guyot, *La Morale*, p. 186.

means, two operating to check population, two to increase the available food supply. These are: (1) natural limitation of the population, as in India, by disease and famine, or artificial limitation, as in France; (2) emigration; (3) conquest; (4) commerce. By conquest nations have obtained from other lands wealth not produced at home, without rendering an equivalent; the fate of Rome and Spain demonstrates whither this leads. By commerce nations set the laws of constant and increasing against that of decreasing returns, exchanging manufactured articles for food to feed their surplus millions. It is in this way that England maintains, in greater comfort than exists elsewhere in Europe, a population not half of whom could be fed from her own soil. The superiority of commerce to conquest as an economic measure arises from the fact that it stimulates, whereas conquest for purposes of exploitation checks, production on both sides.

Commerce thus is capable, as Aristotle long ago declared, of indefinite expansion. But, nevertheless, it does not altogether escape the law of diminishing returns. In order that people may buy, they must have something to sell; and to this end they must produce more of some article than is absolutely necessary to their own consumption. Not only so, but the marginal cost of producing this quantity must be less than the marginal utility of the imported article. The labor pain of production must be small compared to the pleasure of consumption, or people will not continue to produce. Obviously this is a standard which varies from place to place. Throughout the tropical and sub-tropical regions, where the indisposition to labor is great and the pain of labor consequently high, it is this subjective limit which causes vast resources to lie undeveloped, checks production, keeps down commerce, and drives plantation owners either to adopt some form of forced labor—as witness Java—or to abandon in despair the attempt to exploit the natural resources of the country. To measure the probable commerce of such regions by their natural resources alone, without taking account of this subjective factor,—the character of the people,—is only to practice self-deception and court bitter disappointment.

On the other hand, in regions where the pain of labor is not held so great, production is pursued on a more intensive plan. This explains the anomalous fact that the countries having the largest production are often not those with the greatest natural wealth. But, inasmuch as every increase of agricultural production means a larger proportional increase of labor, *ceteris paribus*, there is always a point at which it ceases to pay. This, then, is the fixed or objective limit to production and consequently to commerce. As population increases, it therefore becomes progressively more difficult and finally impossible to create a surplus of agricultural products for purposes of exchange. When this point is reached the country ceases to offer a market for manufactured goods, for the reason that there is nothing wherewith to pay for them; and the people are confronted with the old dilemma, — starvation, emigration, war, or manufacturing. In this way the number of manufacturing nations is constantly increasing and that of agricultural nations decreasing, the hunters multiplying while the game diminishes. The result is a rivalry for markets, — that is, for the means to employ and feed the people, — which grows fiercer day by day. A half century ago this contingency seemed remote enough; England, secure in her industrial and commercial supremacy, having already everything for which men fight, was passionately enamored of peace. To-day her monopoly is broken and her supremacy is passing; competitors are taking the work from her factories and the bread from her people; the habitable earth is parceled out and all nations are arming by land and sea. For, strange as it may appear, the nations are still sadly lacking in that sweet reasonableness which should move them to yield, without a protest, to their betters.

Does all this portend the end of war? It is true that tariffs are used to-day with more effect than were armies in former times. Weaker competitors are driven to the wall and forced out of the race. War of the most deadly character — war which ruins states and crushes nations — is waged without firing a shot. Added to this is the cost of armies and navies, which only the strongest can bear. Shall we therefore conclude, with M. Jean de Bloch, that war has become so expensive and deadly as to be

impossible? His theory is plausible but not convincing. Recent experience confirms the maxim that the more deadly the weapons, the less the slaughter; while the cost of war is one of the crucial tests in the struggle for existence, one of the means whereby the living are parted from the dying nations. It is true that the object and the character of war have changed. Conquests are no longer made by civilized nations for purposes of tribute, nor by the most progressive among them for the purpose of exploitation through unequal commercial laws. If any lapse from the path of rectitude in this respect, they have their reward; no conquest can be permanently profitable to one side which is not so to both. Moreover, war is to-day, more than ever before, a conflict not of arms but of civilizations; the more complicated its machinery, the more it depends upon the intelligence and character of the man behind the gun, and the greater is the drain upon the resources of the nation. To the ancient motto, *Si vis pacem, para bellum*, another must therefore be added, *Si vis bellum, para pacem*. That nation is best prepared for war which best develops and conserves its energies. But all these changes, far-reaching though they are, do not, as is fondly imagined, tend to the abolition of war. The cause of war is as permanent as hunger itself; since both spring from the same source, the law of decreasing returns. So long as that persists, war must remain, in the last analysis, a national business undertaking, designed to procure or preserve foreign markets, that is, the means of continued growth and prosperity. *Chacun doit grandir ou mourir*.¹

¹ Vâcher de Lapouge, *Les Selections Sociales*, chap. viii.

Additional References:

Herbert Spencer, *Principles of Sociology*, Part V, chaps. xvii, xviii, xix.
 Herbert Spencer, *Progress, Its Law and Cause*, in *Essays: Scientific, Political, and Speculative*, Vol. I. J. S. Mackenzie, *Introduction to Social Philosophy*, chaps. v and vi.

PART III—THE FACTORS OF SOCIAL PROGRESS

A. THE PHYSICAL AND BIOLOGICAL FACTORS

X

INFLUENCE EXERCISED BY PHYSICAL LAWS OVER THE ORGANIZATION OF SOCIETY AND THE CHARACTER OF INDIVIDUALS¹

If we inquire what those physical agents are by which the human race is most powerfully influenced, we shall find that they may be classed under four heads, namely, climate, food, soil, and the general aspect of nature; by which last I mean those appearances which, though presented chiefly to the sight, have, through the medium of that or other senses, directed the association of ideas, and hence in different countries have given rise to different habits of national thought. To one of these four classes may be referred all the external phenomena by which man has been permanently affected. The last of these classes, or what I call the general aspect of nature, produces its principal results by exciting the imagination, and by suggesting those innumerable superstitions which are the great obstacles to advancing knowledge. And as, in the infancy of a people, the power of such superstitions is supreme, it has happened that the various aspects of nature have caused corresponding varieties in the popular character, and have imparted to the national religion peculiarities which, under certain circumstances, it is impossible to efface. The other three agents, namely, climate, food, and soil, have, so far as we are aware, had no direct influence of this sort; but they

¹ From Buckle's *History of Civilization in England*, chap. ii, London, 1857-1861.

have, as I am about to prove, originated the most important consequences in regard to the general organization of society, and from them there have followed many of those large and conspicuous differences between nations which are often ascribed to some fundamental difference in the various races into which mankind is divided. But while such original distinctions of race are altogether hypothetical,¹ the discrepancies which are caused by difference of climate, food, and soil are capable of a satisfactory explanation, and, when understood, will be found to clear up many of the difficulties which still obscure the study of history. I purpose, therefore, in the first place, to examine the laws of these three vast agents in so far as they are connected with man in his social condition; and having traced the working of those laws with as much precision as the present state of physical knowledge will allow, I shall then examine the remaining agent, namely, the general aspect of nature, and shall endeavor to point out the most important divergences to which its variations have, in different countries, naturally given rise.

Beginning, then, with climate, food, and soil, it is evident that these three physical powers are in no small degree dependent on each other: that is to say, there is a very close connection between the climate of a country and the food which will ordinarily be grown in that country; while at the same time the food is itself influenced by the soil which produces it, as also by the elevation or depression of the land, by the state of the atmosphere, and, in a word, by all those conditions to the assemblage

¹ I cordially subscribe to the remark of one of the greatest thinkers of our time, who says of the supposed differences of race, "Of all vulgar modes of escaping from the consideration of the effect of social and moral influences on the human mind, the most vulgar is that of attributing the diversities of conduct and character to inherent and natural differences" (*Mill's Principles of Political Economy*, Vol. I, p. 390). Ordinary writers are constantly falling into the error of assuming the existence of this difference, which may or may not exist, but which most assuredly has never been proved. Some singular instances of this will be found in *Alison's History of Europe*, Vol. II, p. 336; Vol. VI, p. 136; Vol. VIII, pp. 525, 526; Vol. XIII, p. 347; where the historian thinks that by a few strokes of his pen he can settle a question of the greatest difficulty, connected with some of the most intricate problems in physiology. On the supposed relation between race and temperament, see *Comte, Philosophie Positive*, Vol. III, p. 355.

of which the name of physical geography is, in its largest sense, commonly given.¹

The union between these physical agents being thus intimate, it seems advisable to consider them not under their own separate heads but rather under the separate heads of the effects produced by their united action. In this way we shall rise at once to a more comprehensive view of the whole question; we shall avoid the confusion that would be caused by artificially separating phenomena which are in themselves inseparable; and we shall be able to see more clearly the extent of that remarkable influence which, in an early stage of society, the powers of nature exercise over the fortunes of man.

Of all the results which are produced among a people by their climate, food, and soil, the accumulation of wealth is the earliest, and in many respects the most important. For although the progress of knowledge eventually accelerates the increase of wealth, it is nevertheless certain that, in the first formation of society, the wealth must accumulate before the knowledge can begin. As long as every man is engaged in collecting the materials necessary for his own subsistence there will be neither leisure nor taste for higher pursuits; no science can possibly be created, and the utmost that can be effected will be an attempt to economize labor by the contrivance of such rude and imperfect instruments as even the most barbarous people are able to invent.

In a state of society like this the accumulation of wealth is the first great step that can be taken, because without wealth there can be no leisure, and without leisure there can be no knowledge. If what a people consume is always exactly equal to what they possess, there will be no residue, and therefore, no capital being accumulated, there will be no means by which the unemployed

¹ As to the proper limits of physical geography, see Prichard on Ethnology, in *Report of the British Association for 1847*, p. 235. The word "climate" I always use in the narrow and popular sense. Dr. Forry and many previous writers make it nearly coincide with "physical geography": "Climate constitutes the aggregate of all the external physical circumstances appertaining to each locality in its relation to organic nature" (Forry, *Climate of the United States and its Endemic Influences*, p. 127, New York, 1842).

classes may be maintained.¹ But if the produce is greater than the consumption, an overplus arises, which, according to well-known principles, increases itself, and eventually becomes a fund out of which, immediately or remotely, every one is supported who does not create the wealth upon which he lives. And now it is that the existence of an intellectual class first becomes possible, because for the first time there exists a previous accumulation, by means of which men can use what they did not produce, and are thus enabled to devote themselves to subjects for which at an earlier period the pressure of their daily wants would have left them no time.

Thus it is that of all the great social improvements the accumulation of wealth must be the first, because without it there can be neither taste nor leisure for that acquisition of knowledge on which, as I shall hereafter prove, the progress of civilization depends. Now, it is evident that among an entirely ignorant people the rapidity with which wealth is created will be solely regulated by the physical peculiarities of their country. At a later period, and when the wealth has been capitalized, other causes come into play; but until this occurs the progress can only depend on two circumstances: first, on the energy and regularity with which labor is conducted, and, secondly, on the returns made to that labor by the bounty of nature. And these two causes are themselves the result of physical antecedents. The returns made to labor are governed by the fertility of the soil, which is itself regulated partly by the admixture of its chemical components, partly by the extent to which, from rivers or from other natural causes, the soil is irrigated, and partly by the heat and humidity of the atmosphere. On the other hand, the energy and regularity with which labor is conducted will be entirely dependent on the influence of climate. This will display itself in two different ways. The first, which is a very obvious consideration, is, that if the heat is intense, men will be indisposed, and in some degree unfitted, for that active industry

¹ By unemployed classes, I mean what Adam Smith calls the unproductive classes; and though both expressions are strictly speaking inaccurate, the word "unemployed" seems to convey more clearly than any other the idea in the text.

which in a milder climate they might willingly have exerted. The other consideration, which has been less noticed, but is equally important, is, that climate influences labor not only by enervating the laborer or by invigorating him, but also by the effect it produces on the regularity of his habits.¹ Thus we find that no people living in a very northern latitude have ever possessed that steady and unflinching industry for which the inhabitants of temperate regions are remarkable. The reason of this becomes clear when we remember that in the more northern countries the severity of the weather and, at some seasons, the deficiency of light render it impossible for the people to continue their usual out-of-door employments. The result is that the working classes, being compelled to cease from their ordinary pursuits, are rendered more prone to desultory habits; the chain of their industry is, as it were, broken, and they lose that impetus which long-continued and uninterrupted practice never fails to give. Hence there arises a national character more fitful and capricious than that possessed by a people whose climate permits the regular exercise of their ordinary industry. Indeed, so powerful is this principle that we may perceive its operation even under the most opposite circumstances. It would be difficult to conceive a greater difference in government, laws, religion, and manners than that which distinguishes Sweden and Norway, on the one hand, from Spain and Portugal, on the other. But these four countries have one great point in common: in all of them continued agricultural industry is impracticable. In the two southern countries labor is interrupted by the heat, by the dryness of the weather, and by the consequent state of the soil. In the two northern countries the same effect is produced by the severity of the winter and the shortness of the days. The consequence is that these four nations, though so different in other respects, are all remarkable for a certain instability and fickleness of character; presenting a striking contrast to the more regular

¹ This has been entirely neglected by the three most philosophical writers on climate, — Montesquieu, Hume, and M. Charles Comte in his *Traité de Législation*. It is also omitted in the remarks of M. Guizot on the influence of climate, *Civilisation en Europe*, p. 97.

and settled habits which are established in countries whose climate subjects the working classes to fewer interruptions, and imposes on them the necessity of a more constant and unremitting employment.¹

These are the great physical causes by which the creation of wealth is governed. There are, no doubt, other circumstances which operate with considerable force, and which, in a more advanced state of society, possess an equal, and sometimes a superior, influence. But this is at a later period; and looking at the history of wealth in its earliest stage, it will be found to depend entirely on soil and climate: the soil regulating the returns made to any given amount of labor; the climate regulating the energy and constancy of the labor itself. It requires but a hasty glance at past events to prove the immense power of these two great physical conditions; for there is no instance in history of any country being civilized by its own efforts, unless it has possessed one of these conditions in a very favorable form. In Asia civilization has always been confined to that vast tract where a rich and alluvial soil has secured to man that wealth without some share of which no intellectual progress can begin. This great region extends, with a few interruptions, from the east of southern China to the western coasts of Asia Minor, of Phœnicia, and of Palestine. To the north of this immense belt there is a long line of barren country which has invariably been peopled by rude and wandering tribes, who are kept in poverty by the ungenial nature of the soil, and who, as long as they remained on it, have never emerged from their uncivilized state. How entirely this depends on physical causes is evident from the fact that these same Mongolian and Tartarian hordes have, at different periods, founded great monarchies in China, in India, and in Persia, and have on all such occasions attained a civilization

¹ See the admirable remarks in Laing's *Denmark*, 1852, pp. 204, 366, 367; though *Norway* appears to be a better illustration than *Denmark*. In *Rey's Science Sociale*, Vol. I, pp. 195, 196, there are some calculations respecting the average loss to agricultural industry caused by changes in the weather; but no notice is taken of the connection between these changes, when abrupt, and the tone of the national character.

nowise inferior to that possessed by the most flourishing of the ancient kingdoms. For in the fertile plains of southern Asia¹ nature has supplied all the materials of wealth; and there it was that these barbarous tribes acquired for the first time some degree of refinement, produced a national literature, and organized a national polity; none of which things they, in their native land, had been able to effect.² In the same way, the Arabs, in their own country, have, owing to the extreme aridity of their soil,³ always been a rude and uncultivated people; for in their case, as in all others, great ignorance is the fruit of great poverty. But in the seventh century they conquered Persia;⁴ in the eighth century they conquered the best part of Spain;⁵ in the ninth century they conquered the Punjaub, and eventually nearly the whole of India.⁶ Scarcely were they established in their fresh settlements when their character seemed to undergo a

¹ This expression has been used by different geographers in different senses; but I take it in its common acceptation, without reference to the more strictly physical view of Ritter and his followers in regard to central Asia. See Prichard's *Physical History of Mankind*, 1844, Vol. IV, p. 278. At page 92, Prichard makes the Himalaya the southern boundary of central Asia.

² There is reason to believe that the Tartars of Tibet received even their alphabet from India. See the interesting Essay on Tartarian Coins in *Journal of Asiatic Society*, Vol. IV, pp. 276, 277; and on the Scythian Alphabet, see Vol. XII, p. 336.

³ In Somerville's *Physical Geography*, Vol. I, p. 132, it is said that in Arabia there are "no rivers"; but Mr. Wellsted (*Travels in Arabia*, Vol. II, p. 409) mentions one which empties itself into the sea five miles west of Aden. On the streams in Arabia, see Meiners, *Über die Fruchtbarkeit der Länder*, Vol. I, pp. 149, 150. That the sole deficiency is want of irrigation appears from Burckhardt, who says (*Travels in Arabia*, Vol. I, p. 240), "In Arabia, wherever the ground can be irrigated by wells, the sands may be soon made productive." And for a striking description of one of the oases of Oman, which shows what Arabia might have been with a good river system, see *Journal of Geographical Society*, Vol. VII, pp. 106, 107.

⁴ Mr. Morier (*Journal of Geographical Society*, Vol. VII, p. 230) says, "The conquest of Persia by the Saracens, A.D. 651." However, the fate of Persia was decided by the battles of Kudseah and Nahavund, which were fought in 638 and 641. See Malcolm's *History of Persia*, Vol. I, pp. xvi, 139, 142.

⁵ In 712. Hallam's *Middle Ages*, Vol. I, p. 369.

⁶ They were established in the Punjaub early in the ninth century, but did not conquer Guzerat and Malwa until five hundred years later. Compare Wilson's note in the *Vishnu Purana*, pp. 481, 482, with Asiatic Researches, Vol. IX, pp. 187, 188, 203. On their progress in the more southern part of the Peninsula, see *Journal of Asiatic Society*, Vol. III, pp. 222, 223; Vol. IV, pp. 28-30.

great change. They, who in their original land were little else than roving savages, were now for the first time able to accumulate wealth, and, therefore, for the first time did they make some progress in the arts of civilization. In Arabia they had been a mere race of wandering shepherds;¹ in their new abodes they became the founders of mighty empires,—they built cities, endowed schools, collected libraries; and the traces of their power are still to be seen at Cordova, at Bagdad, and at Delhi.² Precisely in the same manner, there is adjoining Arabia at the north, and only separated from it elsewhere by the narrow waters of the Red Sea, an immense sandy plain, which, covering the

¹ "A race of pastoral barbarians." Dickinson on the Arabic Language, in *Journal of Asiatic Society*, Vol. V, p. 323. Compare Reynier, *Économie des Arabes*, pp. 27, 28; where, however, a very simple question is needlessly complicated. The old Persian writers bestowed on them the courteous appellation of "a band of naked lizard-eaters" (Malcolm's *History of Persia*, Vol. I, p. 133). Indeed, there are few things in history better proved than the barbarism of a people whom some writers wish to invest with a romantic interest. The eulogy passed on them by Meiners is rather suspicious; for he concludes by saying, "die Eroberungen der Araber waren höchst selten so blutig und zerstörend, als die Eroberungen der Tataren, Persen, Türken, u.s.w., in ältern und neuern Zeiten waren" (*Fruchtbarkeit der Länder*, Vol. I, p. 153). If this is the best that can be said, the comparison with Tartars and Turks does not prove much; but it is singular that this learned author should have forgotten a passage in Diodorus Siculus which gives a pleasant description of them nineteen centuries ago on the eastern side (*Bibliothec. Hist.*, Lib. ii, Vol. II, p. 137): ἔχουσι δὲ βίον ληστρικόν, καὶ πολλὴν τῆς ὁμοῦ χάρας κατατρέχοντες ληστεύουσιν, etc.

² The only branch of knowledge which the Arabians ever raised to a science was astronomy, which began to be cultivated under the caliphs about the middle of the eighth century, and went on improving until "la ville de Bagdad fut, pendant le dixième siècle, le théâtre principal de l'astronomie chez les orientaux" (Montucla, *Histoire des Mathématiques*, Vol. I, pp. 355, 364). The old pagan Arabs, like most barbarous people living in a clear atmosphere, had such an empirical acquaintance with the celestial phenomena as was useful for practical purposes; but there is no evidence to justify the common opinion that they studied this subject as a science. Dr. Dorn (*Transactions of the Asiatic Society*, Vol. II, p. 371) says, "Of a scientific knowledge of astronomy among them no traces can be discovered." Beausobre (*Histoire de Manichée*, Vol. I, p. 20) is quite enthusiastic about the philosophy of the Arabs in the time of Pythagoras! and he tells us, that "ces peuples ont toujours cultivé les sciences." To establish this fact he quotes a long passage from a life of Mohammed written early in the eighteenth century by Boulainvilliers, whom he calls "un des plus beaux génies de France." If this is an accurate description, those who have read the works of Boulainvilliers will think that France was badly off for men of genius; and as to his life of

whole of Africa in the same latitude, extends westward until it reaches the shores of the Atlantic.¹ This enormous tract is, like Arabia, a barren waste;² and therefore, as in Arabia, the inhabitants have always been entirely uncivilized, acquiring no knowledge, simply because they have accumulated no wealth.³ But this great desert is, in its eastern part, irrigated by the waters of the Nile, the overflowing of which covers the sand with a rich alluvial deposit, that yields to labor the most abundant, and

Mohammed, it is little better than a romance; the author was ignorant of Arabic, and knew nothing which had not been already communicated by Maracci and Pococke. See *Biographie Universelle*, Vol. V, p. 321.

In regard to the later Arabian astronomers, one of their great merits was to approximate to the value of the annual precession much closer than Ptolemy had done. See Grant's *History of Physical Astronomy*, p. 319, 1852.

¹ Indeed, it goes beyond it: "the trackless sands of the Sahara desert, which is even prolonged for miles into the Atlantic Ocean in the form of sandbanks" (Somerville's *Physical Geography*, Vol. I, p. 149). For a singular instance of one of these sandbanks being formed into an island, see *Journal of Geographical Society*, Vol. II, p. 284. The Sahara desert, exclusive of Bornu and Darfur, covers an area of 194,000 square leagues; that is, nearly three times the size of France, or twice the size of the Mediterranean. Compare Lyell's *Geology*, p. 694, with Somerville's *Connection of the Sciences*, p. 294. As to the probable southern limits of the plateau of the Sahara, see Richardson's *Mission to Central Africa*, 1853, Vol. II, pp. 146, 156; and as to the part of it adjoining the Mandingo country, see Mungo Park's *Travels*, Vol. I, pp. 237, 238. Respecting the country south of Mandara, some scanty information was collected by Denham in the neighborhood of Lake Tchad (Denham's *Northern and Central Africa*, pp. 121, 122, 144-146).

² Richardson, who traveled through it south of Tripoli, notices its "features of sterility, of unconquerable barrenness" (Richardson's *Sahara*, 1848, Vol. I, p. 86); and see the striking picture at page 409. The long and dreary route from Murzuk to Yeu, on Lake Tchad, is described by Denham, one of the extremely few Europeans who have performed that hazardous journey (Denham's *Central Africa*, pp. 2-60). Even on the shore of the Tchad there is hardly any vegetation, "a coarse grass and a small bell-flower being the only plants that I could discover," p. 90. Compare his remark on Bornu, p. 317. The condition of part of the desert in the fourteenth century is described in the *Travels of Ibn Batuta*, p. 233, which should be compared with the account given by Diodorus Siculus of the journey of Alexander to the temple of Ammon (*Bibliothec. Hist.*, Lib. XVII, Vol. VII, p. 348).

³ Richardson, who traveled in 1850 from Tripoli to within a few days of Lake Tchad, was struck by the stationary character of the people. He says: "Neither in the desert nor in the kingdoms of central Africa is there any march of civilization. All goes on according to a certain routine established for ages past" (*Mission to Central Africa*, Vol. I, pp. 304, 305). See similar remarks in *Pallme's Travels in Kordofan*, pp. 108, 109.

indeed the most extraordinary, returns.¹ The consequence is, that in that spot wealth was rapidly accumulated, the cultivation of knowledge quickly followed, and this narrow strip of land² became the seat of Egyptian civilization, — a civilization which, though grossly exaggerated,³ forms a striking contrast to the barbarism of the other nations of Africa, none of which have been able to work out their own progress, or emerge, in any degree, from the ignorance to which the penury of nature has doomed them.

These considerations clearly prove that of the two primary causes of civilization, the fertility of the soil is the one which in

¹ Abd-Allatif, who was in Egypt early in the thirteenth century, gives an interesting account of the rising of the Nile, to which Egypt owes its fertility (Abd-Allatif, *Relation de l'Égypte*, pp. 329-340, 374-376, and Appendix, p. 504). See also on these periodical inundations, Wilkinson's *Ancient Egyptians*, Vol. IV, pp. 101-104; and on the half-astronomical, half-theological notions connected with them, pp. 372-377; Vol. V, pp. 291, 292. Compare on the religious importance of the Nile, Bunsen's *Egypt*, Vol. I, p. 409. The expression, therefore, of Herodotus (Book II, chap. v, Vol. I, p. 484), δῶρον τοῦ ποταμοῦ, is true in a much larger sense than he intended; since to the Nile Egypt owes all the physical peculiarities which distinguish it from Arabia and the great African desert. Compare Heeren's *African Nations*, Vol. II, p. 58; Reynier, *Économie des Arabes*, p. 3; Postans on the Nile and Indus, in *Journal of Asiatic Society*, Vol. VII, p. 275, and on the difference between the soil of the Nile and that of the surrounding desert, see Volney, *Voyage en Syrie et en Égypte*, Vol. I, p. 14.

² "The average breadth of the valley from one mountain range to the other, between Cairo in Lower and Edfu in Upper Egypt, is only about seven miles; and that of the cultivable land, whose limits depend on the inundation, scarcely exceeds five and a half" (Wilkinson's *Ancient Egyptians*, Vol. I, p. 216). According to Gerard, "the mean width of the valley between Syene and Cairo is about nine miles." Note in Heeren's *African Nations*, Vol. II, p. 62.

³ I will give one instance of this from an otherwise sensible writer, and a man, too, of considerable learning: "As to the physical knowledge of the Egyptians, their contemporaries gave them credit for the astonishing power of their magic; and as we cannot suppose that the instances recorded in Scripture were to be attributed to the exertion of supernatural powers, we must conclude that they were in possession of a more intimate knowledge of the laws and combinations of nature than what is professed by the most learned men of the present age" (Hamilton's *Ægyptiaca*, pp. 61, 62). It is a shame that such nonsense should be written in the nineteenth century; and yet a still more recent author (Vyse on the Pyramids, Vol. I, p. 28) assures us that "the Egyptians, for especial purposes, were endowed with great wisdom and science." Science, properly so called, the Egyptians had none; and as to their wisdom, it was considerable enough to distinguish them from barbarous nations like the old Hebrews, but it was inferior to that of the Greeks, and it was of course immeasurably below that of modern Europe.

the ancient world exercised most influence. But in European civilization the other great cause — that is to say, climate — has been the most powerful ; and this, as we have seen, produces an effect partly on the capacity of the laborer for work, partly on the regularity or irregularity of his habits. The difference in the result has curiously corresponded with the difference in the cause. For although all civilization must have for its antecedent the accumulation of wealth, still what subsequently occurs will be in no small degree determined by the conditions under which the accumulation took place. In Asia and in Africa the condition was a fertile soil, causing an abundant return ; in Europe it was a happier climate, causing more successful labor. In the former case, the effect depends on the relation between the soil and its produce, — in other words, the mere operation of one part of external nature upon another. In the latter case, the effect depends on the relation between the climate and the laborer ; that is the operation of external nature not upon itself but upon man. Of these two classes of relations, the first, being the less complicated, is the less liable to disturbance, and therefore came sooner into play. Hence it is that, in the march of civilization, the priority is unquestionably due to the most fertile parts of Asia and Africa. But although their civilization was the earliest, it was very far indeed from being the best or most permanent. Owing to circumstances which I shall presently state, the only progress which is really effective depends not upon the bounty of nature but upon the energy of man. Therefore it is that the civilization of Europe, which in its earliest stage was governed by climate, has shown a capacity of development unknown to those civilizations which were originated by soil. For the powers of nature, notwithstanding their apparent magnitude, are limited and stationary ; at all events, we have not the slightest proof that they have ever increased, or that they will ever be able to increase. But the powers of man, so far as experience and analogy can guide us, are unlimited ; nor are we possessed of any evidence which authorizes us to assign even an imaginary boundary at which the human intellect will of necessity be brought to a stand. And as this power which the mind possesses of

increasing its own resources is a peculiarity confined to man, and one eminently distinguishing him from what is commonly called external nature, it becomes evident that the agency of climate, which gives him wealth by stimulating his labor, is more favorable to his ultimate progress than the agency of soil, which likewise gives him wealth, but which does so not by exciting his energies but by virtue of a mere physical relation between the character of the soil and the quantity or value of the produce that it almost spontaneously affords.

Thus far as to the different ways in which climate and soil affect the creation of wealth. But another point of equal, or perhaps of superior, importance remains behind. After the wealth has been created, a question arises as to how it is to be distributed ; that is to say, what proportion is to go to the upper classes and what to the lower. In an advanced stage of society this depends upon several circumstances of great complexity, and which it is not necessary here to examine. But in a very early stage of society, and before its later and refined complications have begun, it may, I think, be proved that the distribution of wealth is, like its creation, governed entirely by physical laws ; and that those laws are moreover so active as to have invariably kept a vast majority of the inhabitants of the fairest portion of the globe in a condition of constant and inextricable poverty. If this can be demonstrated, the immense importance of such laws is manifest. For since wealth is an undoubted source of power, it is evident that, supposing other things equal, an inquiry into the distribution of wealth is an inquiry into the distribution of power, and, as such, will throw great light on the origin of those social and political inequalities the play and opposition of which form a considerable part of the history of every civilized country.

If we take a general view of this subject, we may say that after the creation and accumulation of wealth have once fairly begun, it will be distributed among two classes, — those who labor, and those who do not labor ; the latter being, as a class, the more able, the former the more numerous. The fund by which both classes are supported is immediately created by the lower class, whose physical energies are directed, combined, and, as it

were, economized, by the superior skill of the upper class. The reward of the workmen is called their wages; the reward of the contrivers is called their profits. At a later period there will arise what may be called the saving class; that is, a body of men who neither contrive nor work, but lend their accumulations to those who contrive, and in return for the loan receive a part of that reward which belongs to the contriving class. In this case the members of the saving class are rewarded for their abstinence in refraining from spending their accumulations, and this reward is termed the interest of their money; so that there is made a threefold division, — interest, profits, and wages. But this is a subsequent arrangement, which can only take place to any extent when wealth has been considerably accumulated; and in the stage of society we are now considering, this third or saving class can hardly be said to have a separate existence.¹ For our present purpose, therefore, it is enough to ascertain what those natural laws are which, as soon as wealth is accumulated, regulate the proportion in which it is distributed to the two classes of laborers and employers.

Now it is evident that wages being the price paid for labor, the rate of wages must, like the price of all other commodities, vary according to the changes in the market. If the supply of laborers outstrips the demand, wages will fall; if the demand exceeds the supply, they will rise. Supposing, therefore, that in any country there is a given amount of wealth to be divided between employers and workmen, every increase in the number of the workmen will tend to lessen the average reward each can receive. And if we set aside those disturbing causes by which all general views are affected, it will be found that, in the long

¹ In a still more advanced stage there is a fourth division of wealth, and part of the produce of labor is absorbed by rent. This, however, is not an element of price, but a consequence of it; and in the ordinary march of affairs, considerable time must elapse before it can begin. Rent, in the proper sense of the word, is the price paid for using the natural and indestructible powers of the soil, and must not be confused with rent commonly so called; for this last also includes the profits of stock. I notice this, because several of the opponents of Ricardo have placed the beginning of rent too early, by overlooking the fact that apparent rent is very often profits disguised.

run, the question of wages is a question of population; for although the total sum of the wages actually paid depends upon the largeness of the fund from which they are drawn, still the amount of wages received by each man must diminish as the claimants increase, unless, owing to other circumstances, the fund itself should so advance as to keep pace with the greater demands made upon it.¹

To know the circumstances most favorable to the increase of what may be termed the wages-fund is a matter of great moment, but is one with which we are not immediately concerned. The question we have now before us regards not the accumulation of wealth but its distribution; and the object is to ascertain what those physical conditions are which, by encouraging a rapid growth of population, oversupply the labor market, and thus keep the average rate of wages at a very low point.

Of all the physical agents by which the increase of the laboring classes is affected, that of food is the most active and universal. If two countries, equal in all other respects, differ solely in this, — that in one the national food is cheap and abundant,

¹ "Wages depend, then, on the proportion between the number of the laboring population and the capital or other funds devoted to the purchase of labor; we will say, for shortness, the capital. If wages are higher at one time or place than at another, if the subsistence and comfort of the class of hired laborers are more ample, it is, and can be, for no other reason than because capital bears a greater proportion to population. It is not the absolute amount of accumulation or of production that is of importance to the laboring class; it is not the amount even of the funds destined for distribution among the laborers: it is the proportion between those funds and the numbers among whom they are shared. The condition of the class can be bettered in no other way than by altering that proportion to their advantage; and every scheme for their benefit which does not proceed on this as its foundation is, for all permanent purposes, a delusion" (Mill's *Principles of Political Economy*, 1849, Vol. I, p. 425). See also Vol. II, pp. 264, 265, and McCulloch's *Political Economy*, pp. 379, 380. Ricardo, in his *Essay on the Influence of a Low Price of Corn*, has stated, with his usual terseness, the three possible forms of this question: "The rise or fall of wages is common to all states of society, whether it be the stationary, the advancing, or the retrograde state. In the stationary state, it is regulated wholly by the increase or falling off of the population. In the advancing state, it depends on whether the capital or the population advance at the more rapid course. In the retrograde state, it depends on whether population or capital decrease with the greater rapidity" (Ricardo's *Works*, p. 379).

and in the other scarce and dear, the population of the former country will inevitably increase more rapidly than the population of the latter.¹ And, by a parity of reasoning, the average rate of wages will be lower in the former than in the latter, simply because the labor market will be more amply stocked.² An inquiry, therefore, into the physical laws on which the food of different countries depends is, for our present purpose, of the greatest importance; and fortunately it is one respecting which we are able, in the present state of chemistry and physiology, to arrive at some precise and definite conclusions.

The food consumed by man produces two, and only two, effects necessary to his existence. These are, first, to supply him with that animal heat without which the functions of life would stop; and, secondly, to repair the waste constantly taking place in his tissues, that is, in the mechanism of his frame. For each of these separate purposes there is a separate food. The temperature of our bodies is kept up by substances which contain no nitrogen, and are called nonazotized; the incessant decay in our organism is repaired by what are known as azotized substances, in which nitrogen is always found.³ In the former case, the carbon of nonazotized food combines with the oxygen we take in, and gives rise to that internal combustion by which our animal heat is renewed. In the latter case, nitrogen having little affinity for

¹ The standard of comfort being of course supposed the same.

² "No point is better established than that the supply of laborers will always ultimately be in proportion to the means of supporting them" (Principles of Political Economy, chap. xxi, in Ricardo's Works, p. 176). Compare Smith's Wealth of Nations, Book I, chap. xi, p. 86, and M'Culloch's Political Economy, p. 222.

³ The division of food into azotized and nonazotized is said to have been first pointed out by Magendie. See Muller's Physiology, Vol. I, p. 525. It is now recognized by most of the best authorities. See, for instance, Liebig's Animal Chemistry, p. 134; Carpenter's Human Physiology, p. 685; Brande's Chemistry, 1870, Vol. II, pp. 1218. The first tables of food constructed according to it were by Boussingault; see an elaborate essay by Messrs. Lawes and Gilbert on "The Composition of Foods," in *Report of British Association for 1852*, p. 323; but the experiments made by these gentlemen are neither numerous nor diversified enough to establish a general law; still less can we accept their singular assertion, page 346, that the comparative prices of different foods are a test of the nutriment they comparatively contain.

oxygen,¹ the nitrogenous or azotized food is, as it were, guarded against combustion ;² and being thus preserved, is able to perform its duty of repairing the tissues, and supplying those losses which the human organism constantly suffers in the wear and tear of daily life.

These are the two great divisions of food ;³ and if we inquire into the laws which regulate the relation they bear to man, we shall find that in each division the most important agent is climate. When men live in a hot country their animal heat is more easily kept up than when they live in a cold one ; therefore they require a smaller amount of that nonazotized food, the sole business of which is to maintain at a certain point the temperature of the body. In the same way, in the hot country, they require a smaller amount of azotized food, because on the whole their bodily exertions are less frequent, and on that account the decay of their tissues is less rapid.⁴

¹ "Of all the elements of the animal body, nitrogen has the feeblest attraction for oxygen ; and, what is still more remarkable, it deprives all combustible elements with which it combines, to a greater or less extent, of the power of combining with oxygen, that is, of undergoing combustion" (Liebig's *Letters on Chemistry*, p. 372).

² The doctrine of what may be called the protecting power of some substances is still imperfectly understood, and, until late in the eighteenth century, its existence was hardly suspected. It is now known to be connected with the general theory of poisons. See *Turner's Chemistry*, Vol. I, p. 516. To this we must probably ascribe the fact, that several poisons, which are fatal when applied to a wounded surface, may be taken into the stomach with impunity (Brodie's *Physiological Researches*, 1851, pp. 137, 138). It seems more reasonable to refer this to chemical laws than to hold, with Sir Benjamin Brodie, that some poisons "destroy life by paralyzing the muscles of respiration without immediately affecting the action of the heart."

³ Prout's well-known division into saccharine, oily, and albuminous appears to me of much inferior value, though I observe that it is adopted in the last edition of Elliotson's *Human Physiology*, pp. 65, 160. The division by M. Lepelletier into "*les aliments solides et les boissons*" is of course purely empirical (Lepelletier, *Physiologie Médicale*, Vol. II, p. 100, Paris, 1832). In regard to Prout's classification, compare Burdach, *Traité de Physiologie*, Vol. IX, p. 240, with Wagner's *Physiology*, p. 452.

⁴ The evidence of an universal connection in the animal frame between exertion and decay is now almost complete. In regard to the muscular system, see Carpenter's *Human Physiology*, 1846, pp. 440, 441, 581: "There is strong reason to believe the waste or decomposition of the muscular tissue to be in exact proportion to the degree in which it is exerted." This perhaps would be generally

Since, therefore, the inhabitants of hot climates do, in their natural and ordinary state, consume less food than the inhabitants of cold ones, it inevitably follows that, provided other things remain equal, the growth of population will be more rapid in countries which are hot than in those which are cold. For practical purposes it is immaterial whether the greater plenty of a substance by which the people are fed arises from a larger supply, or whether it arises from a smaller consumption. When men eat less, the result will be just the same as if they had more, because the same amount of nutriment will go further, and thus population will gain a power of increasing more quickly than it could do in a colder country, where, even if provisions were equally abundant, they, owing to the climate, would be sooner exhausted.

This is the first point of view in which the laws of climate are, through the medium of food, connected with the laws of population, and therefore with the laws of the distribution of wealth. But there is also another point of view, which follows the same line of thought and will be found to strengthen the argument just stated. This is, that in cold countries not only are men compelled to eat more than in hot ones, but their food is dearer, — that is to say, to get it is more difficult, and requires a greater expenditure of labor. The reason of this I will state as briefly as possible, without entering into any details beyond those which are absolutely necessary for a right understanding of this interesting subject.

The objects of food are, as we have seen, only two, namely : to keep up the warmth of the body, and repair the waste in the

anticipated even in the absence of direct proof ; but what is more interesting is that the same principle holds good of the nervous system. The human brain of an adult contains about one and a half per cent of phosphorus ; and it has been ascertained that after the mind has been much exercised phosphates are excreted, and that in the case of inflammation of the brain their excretion (by the kidneys) is very considerable. See Paget's *Lectures on Surgical Pathology*, 1853, Vol. I, pp. 6, 7, 434 ; Carpenter's *Human Physiology*, pp. 192, 193, 222 ; Simon's *Animal Chemistry*, Vol. II, p. 426 ; Henle, *Anatomie Générale*, Vol. II, p. 172. The reader may also consult, respecting the phosphorus of the brain, the recent very able work of MM. Robin et Verdeil, *Chimie Anatomique*, Vol. I, p. 215 ; Vol. II, p. 348, Paris, 1853. According to these writers (Vol. III, p. 445), its existence in the brain was first announced by Hensing, in 1779.

tissues.¹ Of these two objects, the former is effected by the oxygen of the air entering our lungs, and, as it travels through the system, combining with the carbon which we take in our food.² This combination of oxygen and carbon never can occur without producing a considerable amount of heat, and it is in this way that the human frame is maintained at its necessary

¹ Though both objects are equally essential, the former is usually the more pressing; and it has been ascertained by experiment, what we should expect from theory, that when animals are starved to death there is a progressive decline in the temperature of their bodies; so that the proximate cause of death by starvation is not weakness, but cold. See Williams' Principles of Medicine, p. 36; and on the connection between the loss of animal heat and the appearance of *rigor mortis* in the contractile parts of the body, see Vogel's Pathological Anatomy of the Human Body, p. 532. Compare the important and thoughtful work of Burdach, Physiologie comme Science d'Observation, Vol. V, pp. 144, 436; Vol. IX, p. 231.

² Until the last twenty or five and twenty years, it used to be supposed that this combination took place in the lungs; but more careful experiments have made it probable that the oxygen unites with the carbon in the circulation, and that the blood corpuscles are the carriers of the oxygen. Compare Liebig's Animal Chemistry, p. 78; Letters on Chemistry, pp. 335, 336; Turner's Chemistry, Vol. II, p. 1319; Müller's Physiology, Vol. I, pp. 92, 159. That the combination does not take place in the air cells is moreover proved by the fact that the lungs are not hotter than other parts of the body. See Müller, Vol. I, p. 348; Thomson's Animal Chemistry, p. 633; and Brodie's Physiological Researches, p. 33. Another argument in favor of the red corpuscles being the carriers of oxygen is that they are most abundant in those classes of vertebrata which maintain the highest temperature; while the blood of invertebrata contains very few of them; and it has been doubted if they even exist in the lower articulates and mollusca. See Carpenter's Human Physiology, pp. 109, 532; Grant's Comparative Anatomy, p. 472; Elliotson's Human Physiology, p. 159. In regard to the different dimensions of corpuscles, see Henle, Anatomie Générale, Vol. I, pp. 457-467, 494, 495; Blainville, Physiologie Comparée, Vol. I, pp. 298, 299, 301-304; Milne-Edwards, Zoologie, Part I, pp. 54-56; Fourth Report of British Association, pp. 117, 118; Simon's Animal Chemistry, Vol. I, pp. 103, 104; and, above all, the important observations of Mr. Gulliver (Carpenter, pp. 105, 106). These additions to our knowledge, besides being connected with the laws of animal heat and of nutrition, will, when generalized, assist speculative minds in raising pathology to a science. In the meantime I may mention the relation between an examination of the corpuscles and the theory of inflammation which Hunter and Broussais were unable to settle: this is, that the proximate cause of inflammation is the obstruction of the vessels by the adhesion of the pale corpuscles. Respecting this striking generalization, which is still on its trial, compare Williams' Principles of Medicine, 1848, pp. 258-265, with Paget's Surgical Pathology, 1853, Vol. I, pp. 313-317; Jones and Sieveking's Pathological Anatomy, 1854, pp. 28, 105, 106. The difficulties connected with the scientific study of inflammation are evaded in Vogel's Pathological Anatomy, p. 418; a work which appears to me to have been greatly overrated.

temperature.¹ By virtue of a law familiar to chemists, carbon and oxygen, like all other elements, will only unite in certain definite proportions ;² so that to keep up a healthy balance, it is needful that the food which contains the carbon should vary according to the amount of oxygen taken in ; while it is equally needful that we should increase the quantity of both of these constituents whenever a greater external cold lowers the temperature of the body. Now it is obvious that in a very cold climate this necessity of providing a nutriment more highly carbonized will arise in two distinct ways. In the first place, the air being denser, men imbibe at each inspiration a greater volume of oxygen than they would do in a climate where the air is rarefied by heat.³ In the second place, cold accelerates their respiration, and thus obliging them to inhale more frequently than the inhabitants of hot countries, increases the amount of oxygen which they on an average take in.⁴ On both these grounds the consumption of oxygen

¹ On the amount of heat disengaged by the union of carbon and oxygen, see the experiments of Dulong, in Liebig's *Animal Chemistry*, p. 44 ; and those of Despretz, in Thomson's *Animal Chemistry*, p. 634. Just in the same way we find that the temperature of plants is maintained by the combination of oxygen with carbon : see Balfour's *Botany*, pp. 231, 232, 322, 323. As to the amount of heat caused generally by chemical combination, there is an essay well worth reading by Dr. Thomas Andrews in *Report of British Association for 1849*, pp. 63-78. See also *Report for 1852, Transactions of Sections*, p. 40, and Liebig and Kopp's *Reports on the Progress of Chemistry*, Vol. I, p. 34 ; Vol. III, p. 16 ; Vol. IV, p. 20 ; also Pouillet, *Éléments de Physique*, Paris, 1832, Vol. I, Part I, p. 411.

² The law of definite proportions, which, since the brilliant discoveries by Dalton, is the corner stone of chemical knowledge, is laid down with admirable clearness in Turner's *Elements of Chemistry*, Vol. I, pp. 146-151. Compare Brande's *Chemistry*, Vol. I, pp. 139-144 ; Cuvier, *Progrès des Sciences*, Vol. II, p. 255 ; Somerville's *Connection of the Sciences*, pp. 120, 121. But none of these writers have considered the law so philosophically as M. A. Comte, *Philosophie Positive*, Vol. III, pp. 133-176, one of the best chapters in his very profound but ill-understood work.

³ "Ainsi, dans des temps égaux, la quantité d'oxygène consommée par le même animal est d'autant plus grande que la température ambiante est moins élevée" (Robin et Verdeil, *Chimie Anatomique*, Vol. II, p. 44). Compare Simon's *Lectures on Pathology*, 1850, p. 188, for the diminished quantity of respiration in a high temperature ; though one may question Mr. Simon's inference that *therefore* the blood is more venous in hot countries than in cold ones. This is not making allowance for the difference of diet, which corrects the difference of temperature.

⁴ "The consumption of oxygen in a given time may be expressed by the number of respirations." Liebig's *Letters on Chemistry*, p. 314 ; and Thomson's

becomes greater; it is therefore requisite that the consumption of carbon should also be greater, since by the union of these two elements in certain definite proportions the temperature of the body and the balance of the human frame can alone be maintained.

Proceeding from these chemical and physiological principles, we arrive at the conclusion that the colder the country is in which a people live, the more highly carbonized will be their food. And this, which is a purely scientific inference, has been verified by actual experiment. The inhabitants of the polar regions consume large quantities of whale oil and blubber; while within the tropics such food would soon put an end to life, and therefore the ordinary diet consists almost entirely of fruit, rice, and other vegetables. Now it has been ascertained by careful analysis that in the polar food there is an excess of carbon; in the tropical food, an excess of oxygen. Without entering into details, which to the majority of readers would be distasteful, it may be said generally that the oils contain about six times as much carbon as the fruits, and that they have in them very little oxygen;¹

Animal Chemistry, p. 611. It is also certain that exercise increases the number of respirations; and birds, which are the most active of all animals, consume more oxygen than any others. Milne-Edwards, *Zoologie*, Part I, p. 88; Part II, p. 371; Flourens, *Travaux de Cuvier*, pp. 153, 154, 265, 266. Compare, on the connection between respiration and the locomotive organs, Beclard, *Anatomie Générale*, pp. 39, 44; Burdach, *Traité de Physiologie*, Vol. IX, pp. 485, 556-559; Carus' *Comparative Anatomy*, Vol. I, pp. 99, 164, 358; Vol. II, pp. 142, 160; Grant's *Comparative Anatomy*, pp. 455, 495, 522, 529, 537; Rymer Jones' *Animal Kingdom*, pp. 369, 440, 692, 714, 720; Owen's *Invertebrata*, pp. 322, 345, 386, 505. Thus, too, it has been experimentally ascertained that in human beings exercise increases the amount of carbonic acid gas (Mayo's *Human Physiology*, p. 64; Liebig and Kopp's *Reports*, Vol. III, p. 359).

If we now put these facts together, their bearing on the propositions in the text will become evident, because, on the whole, there is more exercise taken in cold climates than in hot ones, and there must therefore be an increased respiratory action. For proof that greater exercise is both taken and required, compare Wrangel's *Polar Expedition*, pp. 79, 102; Richardson's *Arctic Expedition*, Vol. I, p. 385; Simpson's *North Coast of America*, pp. 49, 88, which should be contrasted with the contempt for such amusements in hot countries. Indeed, in polar regions all this is so essential to preserve a normal state that scurvy can only be kept off in the northern part of the American continent by taking considerable exercise. See Crantz' *History of Greenland*, Vol. I, pp. 46, 62, 338.

¹ "The fruits used by the inhabitants of southern climes do not contain, in a fresh state, more than 12 per cent of carbon; while the blubber and train oil which

while starch, which is the most universal and, in reference to nutrition, the most important constituent in the vegetable world,¹ is nearly half oxygen.²

The connection between this circumstance and the subject before us is highly curious; for it is a most remarkable fact, and one to which I would call particular attention, that owing to some more general law, of which we are ignorant, highly carbonized food is more costly than food in which comparatively little carbon is found. The fruits of the earth, of which oxygen is the most active principle, are very abundant; they may be obtained without danger, and almost without trouble. But that highly carbonized food which in a very cold climate is absolutely necessary to life is not produced in so facile and spontaneous a manner. It is not, like vegetables, thrown up by the soil; but it consists of the fat, the blubber, and the oil³ of powerful and ferocious animals. To procure it, man must incur great risk and

feed the inhabitants of polar regions contain 66 to 80 per cent of that element" (Liebig's *Letters on Chemistry*, p. 320; also p. 375, and Turner's *Chemistry*, Vol. II, p. 1315). According to Prout (Mayo's *Human Physiology*, p. 136), "the proportion of carbon in oily bodies varies from about 60 to 80 per cent." The quantity of oil and fat habitually consumed in cold countries is remarkable. Wrangel (*Polar Expedition*, p. 21) says of the tribes in the northeast of Siberia: "Fat is their greatest delicacy. They eat it in every possible shape, — raw, melted, fresh, or spoilt." See also Simpson's *Discoveries on the North Coast of America*, pp. 147, 404.

¹ "So common that no plant is destitute of it" (Lindley's *Botany*, Vol. I, p. 111); and at page 121, "Starch is the most common of all vegetable productions." Dr. Lindley adds (Vol. I, p. 292), that it is difficult to distinguish the grains of starch secreted by plants from cytoblasts. See also on the starch granules, first noticed by M. Link, *Reports on Botany by the Ray Society*, pp. 223, 370; and respecting its predominance in the vegetable world, compare Thomson's *Chemistry of Vegetables*, pp. 650-652, 875; Brande's *Chemistry*, Vol. II, p. 1160; Turner's *Chemistry*, Vol. II, p. 1236; Liebig and Kopp's *Reports*, Vol. II, pp. 97, 98, 122.

² The oxygen is 49.39 out of 100. See the table in Liebig's *Letters on Chemistry*, p. 379. Amidin, which is the soluble part of starch, contains 53.33 per cent of oxygen. See Thomson's *Chemistry of Vegetables*, p. 654, on the authority of Prout, who has the reputation of being an accurate experimenter.

³ Of which a single whale will yield "cent vingt tonneaux" (Cuvier, *Règne Animal*, Vol. I, p. 297). In regard to the solid food, Sir J. Richardson (*Arctic Expedition*, 1851, Vol. I, p. 243) says that the inhabitants of the Arctic regions only maintain themselves by chasing whales and "consuming blubber."

expend great labor. And although this is undoubtedly a contrast of extreme cases, still it is evident that the nearer a people approach to either extremity, the more subject will they be to the conditions by which that extremity is governed. It is evident that, as a general rule, the colder a country is, the more its food will be carbonized; the warmer it is, the more its food will be oxidized.¹ At the same time, carbonized food, being chiefly drawn from the animal world, is more difficult to obtain than oxidized food, which is drawn from the vegetable world.² The result has been that among nations where the coldness of the climate renders a highly carbonized diet essential, there is for the most part displayed, even in the infancy of society, a bolder and more adventurous character than we find among those other nations whose ordinary nutriment, being highly oxidized, is easily obtained, and indeed is supplied to them by the bounty of nature, gratuitously and without a struggle.³ From this original divergence there follow many other consequences, which, however, I am not now concerned to trace; my present object being

¹ It is said that to keep a person in health his food, even in the temperate parts of Europe, should contain "a full eighth more carbon in winter than in summer" (Liebig's *Animal Chemistry*, p. 16).

² The most highly carbonized of all foods are undoubtedly yielded by animals; the most highly oxidized, by vegetables. In the vegetable kingdom there is, however, so much carbon that its predominance, accompanied with the rarity of nitrogen, has induced chemical botanists to characterize plants as carbonized, and animals as azotized. But we have here to attend to a double antithesis. Vegetables are carbonized in so far as they are nonazotized; but they are oxidized in opposition to the highly carbonized animal food of cold countries. Besides this, it is important to observe that the carbon of vegetables is most abundant in the woody and unnutritious part, which is not eaten; while the carbon of animals is found in the fatty and oily parts, which are not only eaten, but are, in cold countries, greedily devoured.

³ Sir J. Malcolm (*History of Persia*, Vol. II, p. 380), speaking of the cheapness of vegetables in the East, says, "In some parts of Persia fruit has hardly any value." Cuvier, in a striking passage (*Règne Animal*, Vol. I, pp. 73, 74), has contrasted vegetable with animal food, and thinks that the former, being so easily obtained, is the more natural. But the truth is that they are equally natural, though when Cuvier wrote scarcely anything was known of the laws which govern the relation between climate and food. On the skill and energy required to obtain food in cold countries, see Wrangel's *Polar Expedition*, pp. 70, 71, 191, 192; Simpson's *Discoveries on the North Coast of America*, p. 249; Crantz' *History of Greenland*, Vol. I, pp. 22, 32, 105, 131, 154, 155; Vol. II, pp. 203, 265, 324.

merely to point out how this difference of food affects the proportion in which wealth is distributed to the different classes.

The way in which this proportion is actually altered has, I hope, been made clear by the preceding argument. But it may be useful to recapitulate the facts on which the argument is based. The facts, then, are simply these. The rate of wages fluctuates with the population, increasing when the labor market is undersupplied, diminishing when it is oversupplied. The population itself, though affected by many other circumstances, does undoubtedly fluctuate with the supply of food, advancing when the supply is plentiful, halting or receding when the supply is scanty. The food essential to life is scarcer in cold countries than in hot ones; and not only is it scarcer, but more of it is required;¹ so that on both grounds smaller encouragement is given to the growth of that population from whose ranks the labor market is stocked. To express, therefore, the conclusion in its simplest form, we may say that there is a strong and constant tendency in hot countries for wages to be low, in cold countries for them to be high.

Applying now this great principle to the general course of history, we shall find proofs of its accuracy in every direction. Indeed, there is not a single instance to the contrary. In Asia, in Africa, and in America all the ancient civilizations were seated in hot climates; and in all of them the rate of wages was very low, and therefore the condition of the laboring classes very depressed. In Europe, for the first time, civilization arose

¹ Cabanis (*Rapports du Physique et du Moral*, p. 313) says, "Dans les temps et dans les pays froids on mange et l'on agit davantage." That much food is eaten in cold countries, and little in hot ones, is mentioned by numerous travelers, none of whom are aware of the cause. See Simpson's *Discoveries on the North Coast of America*, p. 218; Custine, *Russie*, Vol. IV, p. 66; Wrangel's *Expedition*, pp. 21, 327; Crantz' *History of Greenland*, Vol. I, pp. 145, 360; Richardson's *Central Africa*, Vol. II, p. 46; Richardson's *Sahara*, Vol. I, p. 137; Denham's *Africa*, p. 37; *Journal of Asiatic Society*, Vol. V, p. 144; Vol. VIII, p. 188; Burckhardt's *Travels in Arabia*, Vol. II, p. 265; Niebuhr, *Description de l'Arabie*, p. 45; Ulloa's *Voyage to South America*, Vol. I, pp. 403, 408; *Journal of Geographical Society*, Vol. III, p. 283; Vol. VI, p. 85; Vol. XIX, p. 121; Spix and Martius' *Travels in Brazil*, Vol. I, p. 164; Southey's *History of Brazil*, Vol. III, p. 848; Volney, *Voyage en Syrie et en Égypte*, Vol. I, pp. 379, 380, 460; Low's *Sarawak*, p. 140.

in a colder climate; hence the reward of labor was increased, and the distribution of wealth rendered more equal than was possible in countries where an excessive abundance of food stimulated the growth of population. This difference produced, as we shall presently see, many social and political consequences of immense importance. But before discussing them, it may be remarked that the only apparent exception to what has been stated is one which strikingly verifies the general law. There is one instance, and only one, of a great European people possessing a very cheap national food. This people, I need hardly say, is the Irish. In Ireland the laboring classes have for more than two hundred years been principally fed by potatoes, which were introduced into their country late in the sixteenth, or early in the seventeenth, century.¹ Now the peculiarity of the potato is, that until the appearance of the late disease it was, and perhaps still is, cheaper than any other food equally wholesome. If we compare its reproductive power with the amount of nutriment contained in it, we find that one acre of average land sown with potatoes will support twice as many persons as the same quantity of land sown with wheat.² The consequence is, that in a country where men live on potatoes the population will, if other things are tolerably equal, increase twice as fast as in a country where they live on wheat. And so it has actually occurred. Until a

¹ Meyen (*Geography of Plants*, 1846, p. 313) says that the potato was introduced into Ireland in 1586; but according to Mr. M'Culloch (*Dictionary of Commerce*, 1849, p. 1048), "potatoes, it is commonly thought, were not introduced into Ireland till 1610, when a small quantity was sent by Sir Walter Raleigh to be planted in a garden on his estate in the vicinity of Youghal." Compare Loudon's *Encyclopædia of Agriculture*, p. 845: "first planted by Sir Walter Raleigh on his estate of Youghal, near Cork."

² Adam Smith (*Wealth of Nations*, Book I, chap. xi, p. 67) supposes that it will support three times as many; but the statistics of this great writer are the weakest part of his work, and the more careful calculations made since he wrote bear out the statement in the text. "It admits of demonstration that an acre of potatoes will feed double the number of people that can be fed from an acre of wheat" (Loudon's *Encyclopædia of Agriculture*, 5th ed., 1844, p. 845). So, too, in M'Culloch's *Dictionary*, p. 1048, "an acre of potatoes will feed double the number of individuals that can be fed from an acre of wheat." The daily average consumption of an able-bodied laborer in Ireland is estimated at nine and a half pounds of potatoes for men and seven and a half for women. See Phillips on *Scrofula*, 1846, p. 177.

very few years ago, when the face of affairs was entirely altered by pestilence and emigration, the population of Ireland was, in round numbers, increasing annually three per cent; the population of England during the same period increasing one and a half per cent.¹ The result was that in these two countries the distribution of wealth was altogether different. Even in England the growth of population is somewhat too rapid; and the labor market being overstocked, the working classes are not sufficiently paid for their labor.² But their condition is one of sumptuous splendor compared to that in which only a few years ago the Irish were forced to live. The misery in which they were plunged has no doubt always been aggravated by the ignorance of their rulers, and by that scandalous misgovernment which, until very recently, formed one of the darkest blots on the glory of England. The most active cause, however, was that their wages were so low as to debar them, not only from the comforts but from the common decencies of civilized life; and this evil condition was the natural result of that cheap and abundant food, which encouraged the people to so rapid an increase that the labor market was constantly gorged.³ So far was this carried that an intelligent observer who traveled through Ireland twenty years ago mentions that at that time the average wages were fourpence a day; and that even this wretched pittance could not always be relied upon for regular employment.⁴

¹ Malthus' *Essay on Population*, Vol. I, pp. 424, 425, 431, 435, 441, 442; M'Culloch's *Political Economy*, pp. 381, 382.

² The lowest agricultural wages in our time have been in England about 1 s. a day; while from the evidence collected by Mr. Thornton in 1845, the highest wages then paid were in Lincolnshire, and were rather more than 13 s. a week; those in Yorkshire and Northumberland being nearly as high (Thornton on *Over-Population*, pp. 12-15, 24, 25). Godwin, writing in 1820, estimates the average at 1 s. 6 d. a day (Godwin on *Population*, p. 573). Mr. Phillips, in his work on *Scrofula*, 1846, p. 345, says, "At present the ratio of wages is from 9 s. to 10 s."

³ The most miserable part, namely Connaught, in 1733 contained 242,160 inhabitants; and in 1821, 1,110,229. See Sadler's *Law of Population*, Vol. II, p. 490.

⁴ Mr. Inglis, who in 1834 traveled through Ireland with a particular view to its economical state, says, as the result of very careful inquiries, "I am quite confident that if the whole yearly earnings of the laborers of Ireland were divided by the whole number of laborers, the result would be under this sum — *fourpence* a

Such have been the consequences of cheap food in a country which, on the whole, possesses greater natural resources than any other in Europe.¹ And if we investigate on a larger scale the social and economical conditions of nations, we shall see the same principle everywhere at work. We shall see that, other things remaining equal, the food of a people determines the increase of their numbers, and the increase of their numbers determines the rate of their wages. We shall moreover find that when the wages are invariably low,² the distribution of wealth being thus very unequal, the distribution of political power and social influence will also be very unequal; in other words, it will appear that the normal and average relation between the upper and lower classes will, in its origin, depend upon those peculiarities of

day for the laborers of Ireland" (Inglis' *Journey throughout Ireland in 1834*, London, 1835, 2d ed. Vol. II, p. 300). At Balinasloe, in the county of Galway, "A gentleman with whom I was accidentally in company offered to procure, on an hour's warning, a couple of hundred laborers at fourpence even for temporary employment" (Inglis, Vol. II, p. 17). The same writer says (Vol. I, p. 263), that at Tralee "it often happens that the laborers, after working in the canal from five in the morning until eleven in the forenoon, are discharged for the day with the pittance of twopence." Compare, in Cloncurry's *Recollections*, Dublin, 1849, p. 310, a letter from Dr. Doyle written in 1829, describing Ireland as "a country where the market is always overstocked with labor, and in which a man's labor is not worth, at an average, more than threepence a day."

¹ It is singular that so acute a thinker as Mr. Kay should, in his otherwise just remarks on the Irish, entirely overlook the effect produced on their wages by the increase of population (Kay's *Social Condition of the People*, Vol. I, pp. 8, 9, 92, 223, 306-324). This is the more observable because the disadvantages of cheap food have been noticed not only by several common writers but by the highest of all authorities on population, Mr. Malthus: see the sixth edition of his *Essay on Population*, Vol. I, p. 469; Vol. II, pp. 123, 124, 383, 384. If these things were oftener considered, we should not hear so much about the idleness and levity of the Celtic race; the simple fact being that the Irish are unwilling to work, not because they are Celts but because their work is badly paid. When they go abroad they get good wages, and therefore they become as industrious as any other people. Compare *Journal of Statistical Society*, Vol. VII, p. 24, with Thornton on Over-Population, p. 425; a very valuable work. Even in 1799 it was observed that the Irish as soon as they left their own country became industrious and energetic. See *Parliamentary History*, Vol. XXXIV, p. 222. So, too, in North America, "they are most willing to work hard" (Lyell's *Second Visit to the United States*, 1849, Vol. I, p. 187).

² By low wages I mean low reward of labor, which is of course independent both of the cost of labor and of the money rate of wages.

nature, the operations of which I have endeavored to indicate.¹ After putting all these things together, we shall, I trust, be able to discern, with a clearness hitherto unknown, the intimate connection between the physical and moral world; the laws by which that connection is governed; and the reasons why so many ancient civilizations reached a certain stage of development, and then fell away, unable to resist the pressure of nature, or make head against those external obstacles by which their progress was effectually retarded.

If, in the first place, we turn to Asia, we shall see an admirable illustration of what may be called the collision between internal and external phenomena. Owing to circumstances already stated, Asiatic civilization has always been confined to that rich tract where alone wealth could be easily obtained. This immense zone comprises some of the most fertile parts of the globe; and

¹ In a recent work of considerable ingenuity (Doubleday's True Law of Population, 1847, pp. 25-29, 69, 78, 123, 124, etc.) it is noticed that countries are more populous when the ordinary food is vegetable than when it is animal; and an attempt is made to explain this on the ground that a poor diet is more favorable to fecundity than a rich one. But though the fact of the greater increase of population is indisputable, there are several reasons for being dissatisfied with Mr. Doubleday's explanation.

First. That the power of propagation is heightened by poor living is a proposition which has never been established physiologically; while the observations of travelers and of governments are not sufficiently numerous to establish it statistically.

Second. Vegetable diet is as generous for a hot country as animal diet is for a cold country; and since we know that, notwithstanding the difference of food and climate, the temperature of the body varies little between the equator and the poles (compare Liebig's Animal Chemistry, p. 19; Holland's Medical Notes, p. 473; Pouillet, *Éléments de Physique*, Vol. I, Part I, p. 414; Burdach, *Traité de Physiologie*, Vol. IX, p. 663), we have no reason to believe that there is any other normal variation, but should rather suppose that, in regard to all essential functions, vegetable diet and external heat are equivalent to animal diet and external cold.

Third. Even conceding, for the sake of argument, that vegetable food increases the procreative power, this would only affect the number of births, and not the density of population; for a greater number of births may be, and often is, remedied by a greater mortality; a point in regard to which Godwin, in trying to refute Malthus, falls into serious error (Godwin on Population, p. 317).

Since writing the above I have found that these views of Mr. Doubleday's were in a great measure anticipated by Fourier. See Rey, *Science Sociale*, Vol. I, p. 185.

of all its provinces, Hindustan is certainly the one which for the longest period has possessed the greatest civilization.¹ And as the materials for forming an opinion respecting India are more ample than those respecting any other part of Asia,² I purpose to select it as an example, and use it to illustrate those laws which, though generalized from political economy, chemistry, and physiology, may be verified by that more extensive survey the means of which history alone can supply.

In India the great heat of the climate brings into play that law, already pointed out, by virtue of which the ordinary food is of an oxygenous rather than of a carbonaceous character. This, according to another law, obliges the people to derive their usual diet not from the animal but from the vegetable world, of which starch is the most important constituent. At the same time the high temperature, incapacitating men for arduous labor, makes necessary a food of which the returns will be abundant, and which will contain much nutriment in a comparatively small space. Here, then, we have some characteristics, which, if the preceding views are correct, ought to be found in the ordinary food of the Indian nations. So they all are. From the earliest period the most general food in India has been rice,³ which is the

¹ I use the word "Hindustan" in the popular sense, as extending south to Cape Comorin, though, properly speaking, it only includes the country north of the Nerbudda. Compare Mill's History of India, Vol. II, p. 178; Bohlen, *Das alte Indien*, Vol. I, p. 11; Meiners, *Über die Länder in Asien*, Vol. I, p. 224. The word itself is not found in the old Sanskrit, and is of Persian origin. Halhed's Preface to the *Gentoo Laws*, pp. xx, xxi; *Asiatic Researches*, Vol. III, pp. 368, 369.

² So that, in addition to works published on their philosophy, religion, and jurisprudence, a learned geographer stated several years ago, that "kein anderes asiatisches Reich ist in den letzten drei Jahrhunderten von so vielen und so einsichtsvollen Europäern durchreist und beschrieben worden, als Hindostan" (Meiners, *Länder in Asien*, Vol. I, p. 225). Since the time of Meiners such evidence has become still more precise and extensive, and is, I think, too much neglected by M. Rhode in his valuable work on India. "Dem Zwecke dieser Arbeit gemäss, betrachten wir hier nur Werke der Hindus selbst, oder Auszüge aus denselben als Quellen" (Rhode, *Die Religiöse Bildung der Hindus*, Vol. I, p. 43).

³ This is evident from the frequent and familiar mention of it in that remarkable relic of antiquity, the *Institutes of Manu*. See the *Institutes*, in *Works of Sir W. Jones*, Vol. III, pp. 87, 132, 156, 200, 215, 366, 400, 403, 434. Thus, too, in the enumeration of foods in *Vishnu Purana*, pp. 46, 47, rice is the first mentioned. See further evidence in Bohlen, *Das alte Indien*, Vol. I, p. 22; Vol. II,

most nutritive of all the cerealia;¹ which contains an enormous proportion of starch;² and which yields to the laborer an average return of at least sixty fold.³

Thus possible is it, by the application of a few physical laws, to anticipate what the national food of a country will be, and therefore to anticipate a long train of ulterior consequences. What in this case is no less remarkable is that though, in the south of the peninsula, rice is not so much used as formerly, it has been replaced not by animal food but by another grain called ragi.⁴ The original rice, however, is so suited to the circumstances I have described that it is still the most general food of nearly all the hottest countries of Asia,⁵ from

pp. 159, 160; Wilson's Theatre of the Hindus, Vol. I, Part II, pp. 15, 16, 37, 92, 95; Vol. II, Part II, p. 35, Part III, p. 64; "Notes on the Mahabharata," in *Journal of Asiatic Society*, Vol. VII, p. 141; Travels of Ibn Batuta in Fourteenth Century, p. 164; Colebrooke's Digest of Hindu Law, Vol. I, p. 499; Vol. II, pp. 44, 48, 436, 569; Vol. III, pp. 11, 148, 205-207, 266, 364, 530; Asiatic Researches, Vol. VII, pp. 299, 302; Ward on the Hindoos, Vol. I, p. 209; Vol. III, p. 105.

¹ "It contains a greater proportion of nutritious matter than any of the cerealia" (Somerville's Physical Geography, Vol. II, p. 202).

² It contains from 83.8 to 85.07 per cent of starch. Brande's Chemistry, Vol. II, p. 1624; Thomson's Chemistry of Organic Bodies, p. 883.

³ It is difficult to collect sufficient evidence to strike an average; but in Egypt, according to Savary, rice "produces eighty bushels for one" (Loudon's Encyclopædia of Agriculture, p. 173). In Tenasserim the yield is from eighty to one hundred (Low's History of Tenasserim, in *Journal of Asiatic Society*, Vol. III, p. 29). In South America, two hundred and fifty fold, according to Spix and Martius (Travels in Brazil, Vol. II, p. 79); or from two hundred to three hundred, according to Southey (History of Brazil, Vol. III, pp. 658, 806). The lowest estimate given by M. Meyen is forty fold; the highest, which is marsh rice in the Philippine Islands, four hundred fold (Meyen's Geography of Plants, 1846, p. 301).

⁴ Elphinstone's History of India, p. 7. Ragi is the *Cynosurus Coracanus* of Linnæus; and, considering its importance, it has been strangely neglected by botanical writers.

The best account I have seen of it is in Buchanan's Journey through the Countries of Mysore, Canara, and Malabar, Vol. I, pp. 100-104, 285, 286, 375, 376, 403; Vol. II, pp. 103, 104; Vol. III, pp. 239, 240, 296, 297. In the large cities, millet is generally used, of which "a quantity sufficient for two meals may be purchased for about a half-penny" (Gibson on Indian Agriculture, in *Journal of Asiatic Society*, Vol. VIII, p. 100).

⁵ Marsden's History of Sumatra, pp. 56, 59; Raffles' History of Java, Vol. I, pp. 39, 106, 119, 129, 240; Percival's Ceylon, pp. 337, 364; *Transactions of Society of Bombay*, Vol. II, p. 155; *Transactions of the Asiatic Society*, Vol. I, p. 510; *Journal of Asiatic Society*, Vol. I, pp. 228, 247; Vol. II, pp. 44, 64, 251, 257, 262, 336, 344;

which at different times it has been transplanted to other parts of the world.¹

In consequence of these peculiarities of climate and of food, there has arisen in India that unequal distribution of wealth which we must expect to find in countries where the labor market is always redundant.² If we examine the earliest Indian records which have been preserved, — records between two and three thousand years old, — we find evidence of a state of things similar to that which now exists, and which, we may rely upon it, always has existed ever since the accumulation of capital once fairly began. We find the upper classes enormously rich, and the lower classes miserably poor. We find those by whose labor the wealth is created receiving the smallest possible share of it, the remainder being absorbed by the higher ranks in the form either of rent or of profit. And as wealth is, after intellect, the most permanent source of power, it has naturally happened that

Vol. III, pp. 8, 25, 300, 340; Vol. IV, pp. 82, 83, 104; Vol. V, pp. 241, 246; Asiatic Researches, Vol. V, pp. 124, 229; Vol. XII, p. 148; Vol. XVI, pp. 171, 172; *Journal of Geographical Society*, Vol. II, p. 86; Vol. III, pp. 124, 295, 300; Vol. V, p. 263; Vol. VIII, pp. 341, 359; Vol. XIX, pp. 132, 137.

¹ Rice, so far as I have been able to trace it, has traveled westward. Besides the historical evidence, there are philological probabilities in favor of its being indigenous to Asia, and the Sanskrit name for it has been very widely diffused. Compare Humboldt's *Cosmos*, Vol. II, p. 472, with Craufurd's *History of the Indian Archipelago*, Vol. I, p. 358. In the fourteenth century it was the common food on the Zanguebar coast, and is now universal in Madagascar. *Travels of Ibn Batuta in Fourteenth Century*, p. 56; *Ellis' History of Madagascar*, Vol. I, pp. 39, 297-304; Vol. II, p. 292; *Journal of Geographical Society*, Vol. III, p. 212. From Madagascar its seeds were, according to M'Culloch's *Dictionary of Commerce*, p. 1105, carried to Carolina late in the seventeenth century. It is now cultivated in Nicaragua (*Squier's Central America*, Vol. I, p. 38) and in South America (*Henderson's History of Brazil*, pp. 292, 307, 395, 440, 488), where it is said to grow wild. Compare Meyen's *Geography of Plants*, pp. 291, 297, with Azara, *Voyages dans l'Amérique Méridionale*, Vol. I, p. 100; Vol. II, p. 80. The ancient Greeks, though acquainted with rice, did not cultivate it; and its cultivation was first introduced into Europe by the Arabs. See Humboldt, *Nouvelle Espagne*, Vol. II, pp. 409, 410.

² So far as food is concerned, Diodorus Siculus notices the remarkable fertility of India, and the consequent accumulation of wealth. See two interesting passages in *Bibliothec. Hist.*, Lib. II, Vol. II, pp. 49, 50, 108, 109. But of the economical laws of distribution, he, like all the ancient writers, was perfectly ignorant.

a great inequality of wealth has been accompanied by a corresponding inequality of social and political power. It is not, therefore, surprising that from the earliest period to which our knowledge of India extends, an immense majority of the people, pinched by the most galling poverty, and just living from hand to mouth, should always have remained in a state of stupid debasement, broken by incessant misfortune, crouching before their superiors in abject submission, and only fit either to be slaves themselves or to be led to battle to make slaves of others.¹

To ascertain the precise value of the average rate of wages in India for any long period is impossible; because, although the amount might be expressed in money, still the value of money, that is, its purchasing power, is subject to incalculable fluctuations, arising from changes in the cost of production.² But, for our present purpose, there is a method of investigation which will lead to results far more accurate than any statement could be that depended merely on a collection of evidence respecting the wages themselves. The method is simply this: that inasmuch as the wealth of a country can only be divided into wages, rent, profits, and interest, and inasmuch as interest is on an average an exact measure of profits,³ it follows that if among any people rent and interest are both high wages must be low.⁴ If, therefore, we

¹ An able and very learned apologist for this miserable people says: "The servility so generally ascribed to the Hindu is never more conspicuous than when he is examined as an evidence. But if it be admitted that he acts as a slave, why blame him for not possessing the virtues of a free man? *The oppression of ages has taught him implicit submission*" (Vans Kennedy, in *Transactions of Society of Bombay*, Vol. III, p. 144). Compare the observations of Charles Hamilton in *Asiatic Researches*, Vol. I, p. 305.

² The impossibility of having a standard of value is clearly pointed out in Turgot, *Réflexions sur la Formation et la Distribution des Richesses*, in *Œuvres*, Vol. V, pp. 51, 52. Compare Ricardo's *Works*, pp. 11, 28-30, 46, 166, 253, 270, 401, with M'Culloch's *Principles of Political Economy*, pp. 298, 299, 307.

³ Smith's *Wealth of Nations*, Book I, chap. ix, p. 37; where, however, the proposition is stated rather too absolutely, since the risks arising from an insecure state of society must be taken into consideration. But that there is an average ratio between interest and profits is obvious, and is distinctly laid down by the Sanskrit jurists. See Colebrooke's *Digest of Hindu Law*, Vol. I, pp. 72, 81.

⁴ Ricardo (*Principles of Political Economy*, chap. vi, in *Works*, p. 65) says, "Whatever increases wages, necessarily reduces profits." And in chap. xv, p. 122, "Whatever raises the wages of labor, lowers the profits of stock." In several

can ascertain the current interest of money, and the proportion of the produce of the soil which is absorbed by rent, we shall get a perfectly accurate idea of the wages; because wages are the residue, — that is, they are what is left to the laborers after rent, profits, and interest have been paid.

Now it is remarkable that in India both interest and rent have always been very high. In the Institutes of Manu, which were drawn up about 900 B.C.,¹ the lowest legal interest for money is fixed at fifteen per cent, the highest at sixty per cent.² Nor is this to be considered as a mere ancient law now fallen into disuse. So far from that, the Institutes of Manu are still the basis of Indian jurisprudence;³ and we know on very good authority that in 1810 the interest paid for the use of money varied from thirty-six to sixty per cent.⁴

other places he makes the same assertion, very much to the discomfort of the ordinary reader, who knows that in the United States, for instance, wages and profits are both high. But the ambiguity is in the language, not in the thought; and in these and similar passages Ricardo by wages meant cost of labor, in which sense the proposition is quite accurate. If by wages we mean the reward of labor, then there is no relation between wages and profits; for when rent is low both of them may be high, as is the case in the United States. That this was the view of Ricardo is evident from the following passage: "Profits, it cannot be too often repeated, depend on wages; not on nominal but real wages; not on the number of pounds that may be annually paid to the laborer but on the number of days' work necessary to obtain those pounds" (*Political Economy*, chap. vii, Ricardo's Works, p. 82). Compare Mill's *Principles of Political Economy*, Vol. I, p. 509; Vol. II, p. 225.

¹ I take the estimate of Mr. Elphinstone (*History of India*, pp. 225-228) as midway between Sir William Jones (Works, Vol. III, p. 56) and Mr. Wilson (*Rig Veda Sanhita*, Vol. I, p. xlvii).

² Institutes of Manu, chap. viii, secs. 140-142, in Works of Sir W. Jones, Vol. III, p. 295. The subsequent Sanskrit commentators recognize nearly the same rate of interest, the minimum being fifteen per cent. See Colebrooke's *Digest of Hindu Law*, Vol. I, pp. 29, 36, 43, 98, 99, 237; Vol. II, p. 70.

³ In Colebrooke's *Digest*, Vol. I, p. 454, and Vol. III, p. 229, Manu is called "the highest authority of memorial law" and "the founder of memorial law." The most recent historian of India, Mr. Elphinstone, says (*History of India*, p. 83), "The code of Menu is still the basis of the Hindu jurisprudence; and the principal features remain unaltered to the present day." This remarkable code is also the basis of the laws of the Burmese, and even of those of the Laos (*Journal of the Asiatic Society*, Vol. II, p. 271; Vol. III, pp. 28, 296, 332; Vol. V, p. 252).

⁴ See, in Mill's *History of India*, Vol. I, p. 317, the report of a committee of the House of Commons in 1810, in which it is stated that the ryots paid "the

Thus much as to one of the elements of our present calculation. As to the other element, namely, the rent, we have information equally precise and trustworthy. In England and Scotland the rent paid by the cultivator for the use of land is estimated in round numbers, taking one farm with another, at a fourth of the gross produce.¹ In France the average proportion is about a third;² while in the United States of North America it is well known to be much less, and, indeed, in some parts, to be merely nominal.³ But in India the legal rent, that is, the lowest rate recognized by the law and usage of the country, is one half of the produce; and even this cruel regulation is not strictly enforced, since in many cases rents are raised so high that the cultivator not only receives less than half the produce but receives so little as to have scarcely the means of providing seed to sow the ground for the next harvest.⁴

The conclusion to be drawn from these facts is manifest. Rent and interest being always very high, and interest varying, as it

heavy interest of three, four, and five per cent per month." Ward, writing about the same time, mentions as much as seventy-five per cent being given, and this apparently without the lender incurring any extraordinary risk (Ward's *View of the Hindoos*, Vol. II, p. 190).

¹ Compare the table in Loudon's *Encyclopædia of Agriculture*, p. 778, with Mavor's note in *Tusser's Five Hundred Points of Husbandry*, p. 195, London, 1812, and M'Culloch's *Statistical Account of the British Empire*, 1847, Vol. I, p. 560.

² This is the estimate I have received from persons well acquainted with French agriculture. The rent, of course, varies in each separate instance, according to the natural powers of the soil, according to the extent to which those powers have been improved, and according to the facilities for bringing the produce to market. But, notwithstanding these variations, there must be in every country an average rent, depending upon the operation of general causes.

³ Owing to the immense supply of land preventing the necessity of cultivating those inferior soils which older countries are glad to use, and are therefore willing to pay a rent for the right of using, in the United States profits and wages (i.e. the reward of the laborer, not the cost of labor) are both high, which would be impossible if rent were also high.

⁴ See Rammohun Roy on the Judicial and Revenue Systems of India, 1832, pp. 59-61, 63, 69, 92, 94. At page 69 this high authority says of the agricultural peasantry of Bengal: "In an abundant season, when the price of corn is low, the sale of their whole crops is required to meet the demands of the landholder, leaving little or nothing for seed or subsistence to the laborer or his family." In Cashmere the sovereign received half the produce of the rice crop, leaving the other half to the cultivator (Moorcroft's *Notices of Cashmere*, in *Journal of Geographical Society*, Vol. II, p. 266).

must do, according to the rate of profits, it is evident that wages must have been very low ; for since there was in India a specific amount of wealth to be divided into rent, interest, profits, and wages, it is clear that the first three could only have been increased at the expense of the fourth ; which is saying, in other words, that the reward of the laborers was very small in proportion to the reward received by the upper classes. And though this, being an inevitable inference, does not require extraneous support, it may be mentioned that in modern times, for which alone we have direct evidence, wages have in India always been excessively low, and the people have been, and still are, obliged to work for a sum barely sufficient to meet the exigencies of life.¹

¹ Heber (*Journey through India*, Vol. I, pp. 209, 356, 357, 359) gives some curious instances of the extremely low rate at which the natives are glad to work. As to the ordinary wages in India in the present century, see *Journal of Asiatic Society*, Vol. I, p. 255 ; Vol. V, p. 171 ; Rammohun Roy on the Judicial and Revenue Systems, pp. 105, 106 ; Sykes' *Statistics of the Deccan*, in *Reports of the British Association*, Vol. VI, p. 321 ; Ward's *View of the Hindoos*, Vol. III, p. 207 ; Colebrooke's *Digest of Hindu Law*, Vol. II, p. 184. On wages in the south of India, the fullest information will be found in Buchanan's valuable work, *Journey through the Mysore, Canara, and Malabar*, Vol. I, pp. 124, 125, 133, 171, 175, 216, 217, 298, 390, 415 ; Vol. II, pp. 12, 19, 22, 37, 90, 108, 132, 217, 218, 315, 481, 523, 525, 562 ; Vol. III, pp. 35, 181, 226, 298, 321, 349, 363, 398, 428, 555. I wish that all travelers were equally minute in recording the wages of labor, — a subject of far greater importance than those with which they usually fill their books.

On the other hand, the riches possessed by the upper classes have, owing to this maldistribution of wealth, been always enormous, and sometimes incredible. See Forbes' *Oriental Memoirs*, Vol. II, p. 297 ; Bohlen, *Das alte Indien*, Vol. II, p. 119 ; Travels of Ibn Batuta, p. 41 ; Ward's *View of the Hindoos*, Vol. III, p. 178. The autobiography of the Emperor Jehangir contains such extraordinary statements of his immense wealth that the editor, Major Price, thinks that some error must have been made by the copyist ; but the reader will find in Grote's *History of Greece* (Vol. XII, pp. 229, 245) evidence of the treasures which it was possible for Asiatic rulers to collect in that state of society. The working of this unequal distribution is thus stated by Mr. Glyn (*Transactions of the Asiatic Society*, Vol. I, p. 482) : "The nations of Europe have very little idea of the actual condition of the inhabitants of Hindustan ; they are more wretchedly poor than we have any notion of. Europeans have hitherto been too apt to draw their opinions of the wealth of Hindustan from the gorgeous pomp of a few emperors, sultans, nawabs, and rajahs ; whereas a more intimate and accurate view of the real state of society would have shown that these princes and nobles were engrossing all the wealth of the country, whilst the great body of the people were earning but a bare subsistence, groaning under intolerable burdens, and hardly able to supply themselves with the necessities of life, much less with its luxuries."

This was the first great consequence induced in India by the cheapness and abundance of the national food.¹ But the evil by no means stopped there. In India, as in every other country, poverty provokes contempt, and wealth produces power. When other things are equal, it must be with classes of men as with individuals, that the richer they are, the greater the influence they will possess. It was therefore to be expected that the unequal distribution of wealth should cause an unequal distribution of power; and as there is no instance on record of any class possessing power without abusing it, we may easily understand how it was that the people of India, condemned to poverty by the physical laws of their climate, should have fallen into a degradation from which they have never been able to escape. A few instances may be given to illustrate, rather than to prove, a principle which the preceding arguments have, I trust, placed beyond the possibility of dispute.

To the great body of the Indian people the name of Sudras is given;² and the native laws respecting them contain some minute and curious provisions. If a member of this despised class presumed to occupy the same seat as his superiors, he was either to be exiled or to suffer a painful and ignominious

¹ Turner, who traveled in 1783 through the northeast of Bengal, says: "Indeed, the extreme poverty and wretchedness of these people will forcibly appear, when we recollect how little is necessary for the subsistence of a peasant in these regions. The value of this can seldom amount to more than one penny per day, even allowing him to make his meal of two pounds of boiled rice, with a due proportion of salt, oil, vegetables, fish, and chili" (Turner's Embassy to Tibet, p. 11). Ibn Batuta, who traveled in Hindustan in the fourteenth century, says: "I never saw a country in which provisions were so cheap" (Travels of Ibn Batuta, p. 194).

² The Sudras are estimated by Ward (View of the Hindoos, Vol. III, p. 281) at "three fourths of the Hindoos." At all events, they comprise the whole of the working classes; the Vaisyas not being husbandmen, as they are often called, but landlords, owners of cattle, and traders. Compare Institutes of Manu, chap. ix, secs. 326-333, in Works of Sir W. Jones, Vol. III, pp. 380, 381, with Colebrooke's Digest, Vol. I, p. 15, from which it appears that the Vaisyas were always the masters, and that the Sudra was to "rely on agriculture for his subsistence." The division, therefore, between the "industrious and the servile" (Elphinstone's History of India, p. 12) is too broadly stated; and we must, I think, take the definition of M. Rhode: "Die Kaste der Sudras umfasst die ganze arbeitende, oder um Lohn dienende Classe des Volks" (Die Religiöse Bildung der Hindus, Vol. II, p. 561).

punishment.¹ If he spoke of them with contempt, his mouth was to be burned ;² if he actually insulted them, his tongue was to be slit ;³ if he molested a Brahmin, he was to be put to death ;⁴ if he sat on the same carpet with a Brahmin, he was to be maimed for life ;⁵ if, moved by the desire of instruction, he even listened to the reading of the sacred books, burning oil was to be poured into his ears ;⁶ if, however, he committed them to memory, he was to be killed ;⁷ if he were guilty of a crime, the punishment for it was greater than that inflicted on his superiors ;⁸ but if he himself were murdered, the penalty was the same as for killing a dog, a cat, or a crow.⁹ Should he marry his daughter to a Brahmin, no retribution that could be exacted in this world was sufficient ; it was therefore announced that the Brahmin must go to hell for having suffered contamination from a woman immeasurably his inferior.¹⁰ Indeed, it was ordered that the mere

¹ "Either be banished with a mark on his hinder parts, or the king shall cause a gash to be made on his buttock" (Institutes of Manu, chap. viii, sec. 281, in Works of Sir W. Jones, Vol. VIII, p. 315). See also Ward's View of the Hindoos, Vol. III, p. 67.

² Manu, chap. viii, sec. 271, in Jones' Works, Vol. III, p. 314.

³ Manu, chap. viii, sec. 270.

⁴ "If a Sooder gives much and frequent molestation to a Brahmin, the magistrate shall put him to death" (Halhed's Code of Gentoo Laws, p. 262).

⁵ Halhed's Code of Gentoo Laws, p. 207. As to the case of striking a Brahmin, see Rammohun Roy on the Veds, 2d ed. 1832, p. 227.

⁶ "And if a Sooder listens to the Beids of the Shaster, then the oil, heated as before, shall be poured into his ears ; and arzeez and wax shall be melted together, and the orifice of his ears shall be stopped up therewith" (Halhed, p. 262). Compare the prohibition in Manu, chap. iv, sec. 99, chap. x, secs. 109-111, in Jones' Works, Vol. III, pp. 174, 398.

⁷ "The magistrate shall put him to death" (Halhed, p. 262). In Mrichchakati, the judge says to a Sudra, "If you expound the Vedas, will not your tongue be cut out?" (Wilson's Theatre of the Hindus, Vol. I, Part II, p. 170).

⁸ Ward's View of the Hindoos, Vol. IV, p. 308. To this the only exception was in the case of theft (Mill's History of India, Vol. I, pp. 193, 260). A Brahmin could "on no account be capitally punished" (Asiatic Researches, Vol. XV, p. 44).

⁹ Manu, chap. xi, sec. 132, in Works of Sir W. Jones, Vol. III, p. 422.

¹⁰ "A Brahmin, if he take a Sudra to his bed as his first wife, sinks to the regions of torment" (Institutes of Manu, chap. iii, sec. 17, in Jones' Works, Vol. III, p. 121). Compare the denial of funeral rites, in Colebrooke's Digest of Hindu Law, Vol. III, p. 328. And on the different hells invented by the Hindu clergy, see Vishnu Purana, p. 207 ; Ward's View of the Hindoos, Vol. II, pp. 182, 183 ; Coleman's Mythology of the Hindus, p. 113. The curious details in Rhode, Die

name of a laborer should be expressive of contempt, so that his proper standing might be immediately known.¹ And lest this should not be enough to maintain the subordination of society, a law was actually made forbidding any laborer to accumulate wealth;² while another clause declared that even though his master should give him freedom, he would in reality still be a slave; "for," says the lawgiver, "of a state which is natural to him, by whom can he be divested?"³

By whom, indeed, could he be divested? I ween not where that power was by which so vast a miracle could be worked. For in India, slavery — abject, eternal slavery — was the natural state of the great body of the people; it was the state to which they were doomed by physical laws utterly impossible to resist. The energy of those laws is, in truth, so invincible that wherever they have come into play they have kept the productive classes in perpetual subjection. There is no instance on record of any tropical country in which, wealth having been extensively accumulated, the people have escaped their fate; no instance in which the heat of the climate has not caused an abundance of food, and the abundance of food caused an unequal distribution, first of wealth, and then of political and social power. Among nations subjected to these conditions the people have counted for nothing; they have had no voice in the management of the state, no control over the wealth their own industry created. Their only business has been to labor; their only duty, to obey. Thus

Religieuse Bildung der Hindus, Vol. I, pp. 392, 393, rather refer to Buddhism, and should be compared with *Journal Asiatique*, Vol. VIII, pp. 80, 81, 1826, I série, Paris.

¹ Manu, chap. ii, sec. 31, in Jones' Works, Vol. III, p. 87; also noticed in Rhode, *Die Religieuse Bildung*, Vol. II, p. 561: "Sein Name soll schon Verachtung ausdrücken." So, too, Mr. Elphinstone (*History of India*, p. 17): "The proper name of a Sudra is directed to be expressive of contempt." Compare *Origines du Droit*, in *Œuvres de Michelet*, Bruxelles, 1840, Vol. II, p. 387.

² Manu, chap. x, sec. 129, in Jones' Works, Vol. III, p. 401. This law is pointed out by Mill (*History of India*, Vol. I, p. 195) as an evidence of the miserable state of the people, which Mr. Wilson (note in page 194) vainly attempts to evade.

³ "A Sudra, though emancipated by his master, is not released from a state of servitude; for of a state which is natural to him, by whom can he be divested?" (*Institutes of Manu*, chap. viii, sec. 414, in Works of Sir W. Jones, Vol. III, p. 333).

there have been generated among them those habits of tame and servile submission by which, as we know from history, they have always been characterized. For it is an undoubted fact that their annals furnish no instance of their having turned upon their rulers, no war of classes, no popular insurrections, not even one great popular conspiracy. In those rich and fertile countries there have been many changes, but all of them have been from above, not from below. The democratic element has been altogether wanting. There have been, in abundance, wars of kings and wars of dynasties. There have been revolutions in the government, revolutions in the palace, revolutions on the throne; but no revolutions among the people,¹ no mitigation of that hard lot which nature rather than man assigned to them. Nor was it until civilization arose in Europe that other physical laws came into operation, and therefore other results were produced. In Europe, for the first time, there was some approach to equality, some tendency to correct that enormous disproportion of wealth and power which formed the essential weakness of the greatest of the more ancient countries. As a natural consequence, it is in Europe that everything worthy of the name of civilization has originated; because there alone have attempts been made to preserve the balance of its relative parts. There alone has society been organized according to a scheme, not indeed sufficiently large, but still wide enough to include all the different classes of which it is composed, and thus, by leaving room for the progress of each, to secure the permanence and advancement of the whole.

The way in which certain other physical peculiarities confined to Europe have also accelerated the progress of man by diminishing his superstition will be indicated towards the end of this chapter; but as that will involve an examination of some laws which I have not yet noticed, it seems advisable, in the first

¹ An intelligent observer says: "It is also remarkable how little the people of Asiatic countries have to do in the revolutions of their governments. They are never guided by any great and common impulse of feeling, and take no part in events the most interesting and important to their country and their own prosperity" (M'Murdo on the Country of Sindh, in *Journal of Asiatic Society*, Vol. I, p. 250). Compare similar remarks in Herder's *Ideen zur Geschichte*, Vol. III, p. 114; and even in Alison's *History of Europe*, Vol. X, pp. 419, 420.

place, to complete the inquiry now before us ; and I therefore purpose proving that the line of argument which has been just applied to India is likewise applicable to Egypt, to Mexico, and to Peru. For by thus including in a single survey the most conspicuous civilizations of Asia, Africa, and America, we shall be able to see how the preceding principles hold good of different and distant countries ; and we shall be possessed of evidence sufficiently comprehensive to test the accuracy of those great laws which, without such precaution, I might be supposed to have generalized from scanty and imperfect materials.

The reasons why, of all the African nations, the Egyptians alone were civilized, have been already stated, and have been shown to depend on those physical peculiarities which distinguish them from the surrounding countries, and which, facilitating the acquisition of wealth, not only supplied them with material resources that otherwise they could never have obtained, but also secured to their intellectual classes the leisure and the opportunity of extending the boundaries of knowledge. It is, indeed, true that, notwithstanding these advantages, they effected nothing of much moment ; but this was owing to circumstances which will be hereafter explained ; and it must, at all events, be admitted that they raised themselves far above every other people by whom Africa was inhabited.

The civilization of Egypt being, like that of India, caused by the fertility of the soil, and the climate being also very hot,¹ there were in both countries brought into play the same laws ; and there naturally followed the same results. In both countries we find the national food cheap and abundant ; hence the labor market oversupplied ; hence a very unequal division of wealth and power ; and hence all the consequences which such inequality will inevitably produce. How this system worked in India I have just attempted to examine ; and although the materials for studying the former condition of Egypt are much less ample, they are still sufficiently numerous to prove the striking analogy between the two civilizations and the identity of those great

¹ Volney (*Voyage en Egypte*, Vol. I, pp. 58-63) has a good chapter on the climate of Egypt.

principles which regulated the order of their social and political development.

If we inquire into the most important circumstances which concerned the people of ancient Egypt, we shall see that they are exactly a counterpart of those that have been noticed in India. For, in the first place, as regards their ordinary food, what rice is to the most fertile parts of Asia dates are to Africa. The palm tree is found in every country from the Tigris to the Atlantic;¹ and it supplies millions of human beings with their daily food in Arabia,² and in nearly the whole of Africa north of the equator.³ In many parts of the great African desert it is indeed unable to bear fruit; but naturally it is a very hardy plant, and produces dates in such profusion that towards the north of the Sahara they are eaten not only by man but also by domestic animals.⁴ And in Egypt, where the palm is said to be

¹ It is, however, unknown in South Africa. See the account of the Palmaceæ in Lindley's *Vegetable Kingdom*, 1847, p. 136, and Meyen's *Geography of Plants*, p. 337.

² "Of all eatables used by the Arabs, dates are the most favorite" (Burckhardt's *Travels in Arabia*, Vol. I, p. 56. See also for proof of their abundance in the west of Arabia, Vol. I, pp. 103, 157, 238; Vol. II, pp. 91, 100, 105, 118, 209, 210, 214, 253, 300, 331. And on the dates of Oman and the east of Arabia, see Wellsted's *Travels in Arabia*, Vol. I, pp. 188, 189, 236, 276, 290, 349. Compare Niebuhr, *Description de l'Arabie*, pp. 142, 296. Indeed, they are so important that the Arabs have different names for them, according to the stages of their growth. Djewhari says, "La dénomination *balah* précède le nom *bosr*; car la datte se nomme d'abord *tala*, en suite *khalal*, puis *balah*, puis *bosr*, puis *rotab*, et enfin *tamr*" (De Sacy's note to Abd-Allatif's *Relation de l'Égypte*, p. 74). See also p. 118. Other notices of the dates of Arabia will be found in *Travels of Ibn Batuta in Fourteenth Century*, p. 66; *Journal of Asiatic Society*, Vol. VIII, p. 286; *Journal of Geographical Society*, Vol. IV, p. 201; Vol. VI, pp. 53, 55, 58, 66, 68, 74; Vol. VII, p. 32; Vol. IX, pp. 147, 151.

³ Heeren (*Trade of the African Nations*, Vol. I, p. 182) supposes that in Africa dates are comparatively little known south of 26° north latitude. But this learned writer is certainly mistaken; and a reference to the following passages will show that they are common as far down as the parallel of Lake Tchad, which is nearly the southern limit of our knowledge of central Africa: Denham's *Central Africa*, p. 295; Clapperton's *Journal*, in *Appendix to Denham*, pp. 34, 59; Clapperton's *Second Expedition*, p. 159. Further east they are somewhat scarcer, but are found much more to the south than is supposed by Heeren. See Pallme's *Kor-dofan*, p. 220.

⁴ "Dates are not only the principal growth of the Fezzan oases, but the main subsistence of their inhabitants. All live on dates; men, women, and children,

of spontaneous growth,¹ dates, besides being the chief sustenance of the people, are so plentiful that from a very early period they have been commonly given to camels, the only beasts of burden generally used in that country.

From these facts it is evident that, taking Egypt as the highest type of African civilization, and India as the highest type of Asiatic civilization, it may be said that dates are to the first civilization what rice is to the second. Now it is observable that all the most important physical peculiarities found in rice are also found in dates. In regard to their chemistry, it is well known that the chief principle of the nutriment they contain is the same in both, the starch of the Indian vegetable being merely turned into the sugar of the Egyptian. In regard to the laws of climate, their affinity is equally obvious, since dates, like rice, belong to hot countries, and flourish most in or near the tropics. In regard to their increase, and the laws of their connection with the soil, the analogy is also exact; for dates, just the same as rice, require little labor, and yield abundant returns, while they occupy so small a space of land in comparison with the nutriment they afford that upwards of two hundred palm trees are sometimes planted on a single acre.²

horses, asses, and camels, and sheep, fowls, and dogs" (Richardson's *Travels in the Sahara*, Vol. II, p. 323, and see Vol. I, p. 343). As to those parts of the desert where the palm will not bear, see Vol. I, pp. 387, 405; Vol. II, pp. 291, 363. Respecting the dates of Western Africa, see *Journal of Geographical Society*, Vol. XII, p. 204.

¹ "It flourished spontaneously in the valley of the Nile" (Wilkinson's *Ancient Egyptians*, Vol. II, p. 372). As further illustration of the importance to Africa of this beautiful plant, it may be mentioned that from the high palm there is prepared a peculiar beverage, which in some parts is in great request. On this, which is called palm wine, see M'William's *Medical Expedition to the Niger*, pp. 71, 116; Meredith's *Gold Coast of Africa*, 1812, pp. 55, 56; Laird and Oldfield's *Expedition into the Interior of Africa*, 1837, Vol. II, pp. 170, 213; Bowdich's *Mission to Ashantee*, pp. 69, 100, 152, 293, 386, 392. But I doubt if this is the same as the palm wine mentioned in Balfour's *Botany*, 1849, p. 532. Compare Tuckey's *Expedition to the Zaire*, pp. 155, 216, 224, 356.

² "In the valley of the Nile a feddan (1 $\frac{1}{4}$ acres) is sometimes planted with four hundred trees" (Wilkinson's *Ancient Egyptians*, Vol. II, p. 178). At Murzuk an entire date palm is only worth about a shilling (Richardson's *Central Africa*, Vol. I, p. 111).

Thus striking are the similarities to which, in different countries, the same physical conditions naturally give rise. At the same time, in Egypt, as in India, the attainment of civilization was preceded by the possession of a highly fertile soil; so that, while the exuberance of the land regulated the speed with which wealth was created, the abundance of the food regulated the proportions into which the wealth was divided. The most fertile part of Egypt is the Said;¹ and it is precisely there that we find the greatest display of skill and knowledge, the splendid remains of Thebes, Karnak, Luxor, Dendera, and Edfu.² It is also in the Said, or, as it is often called, the Thebaid, that a food is used which multiplies itself even more rapidly than either dates or rice. This is the dhourra, which until recently was confined to Upper Egypt,³ and of which the reproductive power is so remarkable that it yields to the laborer a return of two hundred and forty for one.⁴ In Lower Egypt the dhourra was formerly

¹ On the remarkable fertility of the Said, see Abd-Allatif, *Relation de l'Égypte*, p. 3.

² The superiority of the ruins in southern Egypt over those in the northern part is noticed by Heeren (*African Nations*, Vol. II, p. 69), and must, indeed, be obvious to whoever has studied the monuments. In the Said the Coptic was preserved longer than in Lower Egypt, and is known to philologists by the name of Misr. See Quatremère, *Recherches sur la Langue de l'Égypte*, pp. 20, 41, 42. See also on the Saidic, pp. 134-140, and some good remarks by Dr. Prichard (*Physical History*, Vol. II, p. 202), who, however, adopts the paradoxical opinion of Georgi respecting the origin of the language of the Thebaid.

³ Abd-Allatif (*Relation de l'Égypte*, p. 32) says, that in his time it was only cultivated in the Said. This curious work by Abd-Allatif was written in A.D. 1203 (*Relation*, p. 423). Meiners thinks that Herodotus and other ancient writers refer to the dhourra without mentioning it: "Diese Durra muss daher im Herodot, wie in andern alten Schriftstellern, vorzüglich verstanden werden, wenn von hundert, zwei hundert, und mehrfältigen Früchten, welche die Erde trage, die Rede ist" (Meiners, *Fruchtbarkeit der Länder*, Vol. I, p. 139). According to Volney, it is the *Holcus Arundinaceus* of Linnæus, and appears to be similar to millet; and though that accurate traveler distinguishes between them, I observe that Captain Haines, in a recent memoir, speaks of them as being the same. Compare Haines in *Journal of Geographical Society*, Vol. XV, p. 118, with Volney, *Voyage en Égypte*, Vol. I, p. 195.

⁴ "The return is in general not less than two hundred and forty for one; and the average price is about 3*s.* 9*d.* the ardeb, which is scarcely 3*d.* per bushel" (Hamilton's *Ægyptiaca*, p. 420). In Upper Egypt "the doura constitutes almost the whole subsistence of the peasantry" (p. 419). At p. 96, Hamilton says, "I have frequently counted three thousand grains in one ear of doura, and each

unknown; but, in addition to dates, the people made a sort of bread from the lotus, which sprang spontaneously out of the rich soil of the Nile.¹ This must have been a very cheap and accessible food; while to it there was joined a profusion of other plants and herbs, on which the Egyptians chiefly lived.² Indeed, so inexhaustible was the supply, that at the time of the Mohammedan invasion there were, in the single city of Alexandria, no less than four thousand persons occupied in selling vegetables to the people.³

From this abundance of the national food there resulted a train of events strictly analogous to those which took place in India. In Africa, generally, the growth of population, though on the one hand stimulated by the heat of the climate, was on the other hand checked by the poverty of the soil. But on the banks of the Nile this restraint no longer existed,⁴ and therefore the laws already noticed came into uncontrolled operation. By virtue

stalk has in general four or five ears." For an account of the dhourra bread, see Volney, *Voyage en Égypte*, Vol. I, p. 161.

¹ Ἐπεὶν πλήρης γένηται ὁ ποταμός, καὶ τὰ πεδία πελαγίστη, φύεται ἐν τῷ ὕδατι κρίνεα πολλὰ, τὰ Αἰγύπτῳ καλέουσι λωτόν· ταῦτα ἐπεὶν δρέψωσι, ἀβαίρουσι πρὸς ἥλιον. καὶ ἔπειτα τὸ ἐκ τοῦ μέσου τοῦ λωτοῦ τῇ μήκῃ ἐν ἑμπερεῖ, πτίσαντες, ποιῶνται ἕξ αὐτοῦ ἄρτους ὅπου πύρι (Herodotus, II, 92).

² Wilkinson's *Ancient Egyptians*, Vol. II, pp. 370-372, 400; Vol. IV, p. 59. Abd-Allatif gives a curious account of the different vegetables grown in Egypt early in the thirteenth century (*Relation*, pp. 16-36, and the notes of De Sacy, pp. 37-134). On the *κράμος* of Herodotus there are some botanical remarks worth reading in the *Correspondence* of Sir J. E. Smith, Vol. II, pp. 224-232; but I doubt the assertion (p. 227) that Herodotus "knew nothing of any other kind of *κράμος* in Egypt than that of the ordinary bean."

³ "When Alexandria was taken by Amer, the lieutenant of the Caliph Omar, no less than four thousand persons were engaged in selling vegetables in that city" (Wilkinson's *Ancient Egyptians*, Vol. II, p. 372, and see Vol. I, p. 277; Vol. IV, p. 60). Niebuhr (*Description de l'Arabie*, p. 136) says that the neighborhood of Alexandria is so fertile that "le froment y rend le centuple." See also, on its rich vegetation, Matter, *Histoire de l'École d'Alexandrie*, Vol. I, p. 52.

⁴ The encouragement given to the increase of population by the fertility arising from the inundation of the Nile is observed by many writers, but by none so judiciously as Malthus (*Essay on Population*, Vol. I, pp. 161-163). This great work, the principles of which have been grossly misrepresented, is still the best which has been written on the important subject of population; though the author, from a want of sufficient reading, often errs in his illustrations, while he unfortunately had no acquaintance with those branches of physical knowledge which are intimately connected with economical inquiries.

of those laws, the Egyptians were not only satisfied with a cheap food, but they required that food in comparatively small quantities, thus by a double process increasing the limit to which their numbers could extend. At the same time the lower orders were able to rear their offspring with the greater ease, because, owing to the high rate of temperature, another considerable source of expense was avoided; the heat being such that, even for adults, the necessary clothes were few and slight, while the children of the working classes went entirely naked, affording a striking contrast to those colder countries, where, to preserve ordinary health, a supply of warmer and more costly covering is essential. Diodorus Siculus, who traveled in Egypt nineteen centuries ago, says that to bring up a child to manhood did not cost more than twenty drachmas, scarcely thirteen shillings English money, — a circumstance which he justly notices as a cause of the populousness of the country.¹

To compress into a single sentence the preceding remarks, it may be said that in Egypt the people multiplied rapidly, because while the soil increased their supplies, the climate lessened their wants. The result was that Egypt was not only far more thickly peopled than any other country in Africa but probably more so than any in the ancient world. Our information upon this point is indeed somewhat scanty, but it is derived from sources of unquestioned credibility. Herodotus, who the more he is understood the more accurate he is found to be,² states that

¹ Τρέφουσι δὲ τὰ παῖδια μετὰ τινος εὐχερείας ἀδαπάνου, καὶ παντελῶς ἀπίστου. . . ἀνυποδέτων δὲ τῶν πλείστων καὶ γυμνῶν τρεφεμένων διὰ τὴν εὐκρασίαν τῶν τόπων, τὴν πᾶσαν δαπάνην οἱ γονεῖς, ἄχρις ἂν εἰς ἡλικίαν ἔλθῃ τὸ τέκνον, οὐ πλείω ποιοῦσι δραχμῶν ἑκοσι. δι' αἷς αἰτίας μάλιστα τὴν Αἰγύπτου συμβαίνει πολυανθρωπία διαφέρειν, καὶ διὰ τοῦτο πλείστας ἔχειν μεγάλων ἔργων κατασκευάς (Bibliothec. Hist., Book I, chap. lxxx, Vol. I, p. 238).

² Frederick Schlegel (Philosophy of History, p. 247, London, 1846) truly says, "The deeper and more comprehensive the researches of the moderns have been on ancient history, the more have their regard and esteem for Herodotus increased." His minute information respecting Egypt and Asia Minor is now admitted by all competent geographers, and I may add that a recent and very able traveler has given some curious proofs of his knowledge even of the western parts of Siberia. See Erman's valuable work, *Travels in Siberia*, Vol. I, pp. 211, 297-301.

in the reign of Amasis there were said to have been twenty thousand inhabited cities.¹ This may, perhaps, be considered an exaggeration; but what is very observable is that Diodorus Siculus, who traveled in Egypt four centuries after Herodotus, and whose jealousy of the reputation of his great predecessor made him anxious to discredit his statement,² does, nevertheless, on this important point, confirm them. For he not only remarks that Egypt was at that time as densely inhabited as any existing country, but he adds, on the authority of records which were then extant, that it was formerly the most populous in the world, having contained, he says, upwards of eighteen thousand cities.³

These were the only two ancient writers who, from personal knowledge, were well acquainted with the state of Egypt;⁴ and their testimony is the more valuable because it was evidently drawn from different sources; the information of Herodotus being chiefly collected at Memphis, that of Diodorus at Thebes.⁵

¹ 'Επ' Ἀμάσιος δὲ βασιλείος λέγεται Αἴγυπτος μάλιστα δὴ τότε εὐδαιμονῆσαι, καὶ τὰ ἀπὸ τοῦ ποταμοῦ τῇ χώρῃ γινόμενα, καὶ τὰ ἀπὸ τῆς χώρας τοῖσι ἀνθρώποισι. καὶ πόλεις ἐν αὐτῇ γενέσθαι τὰς ἀπάσας τότε δισμυρίας τὰς οἰκομέντας (Herodotus, Book II, chap. clxxvii).

² Diodorus, who, though an honest and painstaking man, was in every respect inferior to Herodotus, says, impertinently enough, ὅσα μὲν οὖν Ἡρόδοτος καὶ τιμω τῶν τὰς Αἰγυπτίων πράξεις συνταξαμένων ἐσχεδιάκασιν, ἐκουσίως προκρίναντες τῆς ἀληθείας τὸ παραδοξολογεῖν, καὶ μύθους πλάττειν ψυχαγωγίας ἕνεκα, παρήσομεν (Bibliothec. Hist., Book I, chap. lxix, Vol. I, p. 207). In other places he alludes to Herodotus in the same tone, without actually mentioning him.

³ Πολυανθρωπία δὲ τὸ μὲν παλαιὸν πολλὴ πρόσχε πάντων τῶν γνωριζομένων τόπων κατὰ τὴν οἰκουμένην, καὶ καθ' ἡμᾶς δὲ οὐδενὸς τῶν ἄλλων δοκεῖ λείπεσθαι. ἐπὶ μὲν γὰρ τῶν ἀρχαίων χρόνων ἔσχε κώμας ἀξιολόγους, καὶ πόλεις πλείους τῶν μυρίων καὶ ὀκτακισχιλίων, ὥς ἐν ταῖς ἀναγραφαῖς ὁρᾶν ἔστι κατακεχωρισμένον (Diod. Sic., Bibliothec. Hist., Book I, chap. xxxi, Vol. I, p. 89).

⁴ Notwithstanding the positive assertions of M. Matter (*Histoire de l'École d'Alexandrie*, Vol. II, p. 285; compare *Histoire du Gnosticisme*, Vol. I, p. 48), there is no good evidence for the supposed travels in Egypt of the earlier Greeks, and it is even questionable if Plato ever visited that country. "Whether he was ever in Egypt is doubtful" (Bunsen's *Egypt*, Vol. I, p. 60). The Romans took little interest in the subject (Bunsen, Vol. I, pp. 152-158); and, says M. Bunsen (p. 152). "with Diodorus all systematic inquiry into the history of Egypt ceases, not only on the part of the Greeks, but of the ancients in general." Mr. Leake, in an essay on the Quorra, arrives at the conclusion that after the time of Ptolemy the ancients made no additions to their knowledge of African geography (*Journal of Geographical Society*, Vol. II, p. 9).

⁵ See on this some good remarks in Heeren's *African Nations*, Vol. II, pp. 202-207; and as to the difference between the traditions of Thebes and

And whatever discrepancies there may be between these two accounts, they are both agreed respecting the rapid increase of the people and the servile condition into which they had fallen. Indeed, the mere appearance of those huge and costly buildings, which are still standing, is a proof of the state of the nation that erected them. To raise structures so stupendous,¹ and yet so useless,² there must have been tyranny on the part of the rulers and slavery on the part of the people. No wealth, however great, no expenditure, however lavish, could meet the expense which would have been incurred if they had been the work of free men, who received for their labor a fair and honest reward.³ But in Egypt, as in India, such considerations were disregarded, because everything tended to favor the upper ranks of society and depress the lower. Between the two there was an immense and impassable gap.⁴ If a member of the industrious classes changed his usual employment or was known to pay attention to political matters, he was severely punished;⁵ and under no circumstances

Memphis, see Matter, *Histoire de l'École d'Alexandrie*, Vol. I, p. 7. The power and importance of the two cities fluctuated, both being at different periods the capital. Bunsen's *Egypt*, Vol. II, pp. 54, 55, 244, 445, 446; Vyse on the *Pyramids*, Vol. III, pp. 27, 100; Sharpe's *History of Egypt*, Vol. I, pp. 9, 19, 24, 34, 167, 185.

¹ Sir John Herschel (*Discourse on Natural Philosophy*, p. 60) calculates that the great pyramid weighs 12,760,000,000 pounds. Compare Lyell's *Principles of Geology*, p. 459, where the still larger estimate of 6,000,000 tons is given. But according to Perring, the present quantity of masonry is 6,316,000 tons, or 82,110,000 cubic feet. See Bunsen's *Egypt*, Vol. II, p. 155, London, 1854, and Vyse on the *Pyramids*, 1840, Vol. II, p. 113.

² Many fanciful hypotheses have been put forward as to the purpose for which the pyramids were built; but it is now admitted that they were neither more nor less than tombs for the Egyptian kings! See Bunsen's *Egypt*, Vol. II, pp. xvii, 88, 105, 372, 389; and Sharpe's *History of Egypt*, Vol. I, p. 21.

³ For an estimate of the expense at which one of the pyramids could be built in our time by European workmen, see Vyse on the *Pyramids*, Vol. II, p. 268. On account, however, of the number of disturbing causes, such calculations have little value.

⁴ Those who complain that in Europe this interval is still too great may derive a species of satisfaction from studying the old extra-European civilizations.

⁵ Wilkinson's *Ancient Egyptians*, Vol. II, pp. 8, 9. "Nor was any one permitted to meddle with political affairs, or to hold any civil office in the state." . . . "If any artisan meddled with political affairs, or engaged in any other employment than the one to which he had been brought up, a severe punishment was instantly inflicted upon him." Compare Diod. Sic., *Bibliothec. Hist.*, Book I, chap. lxxiv, Vol. I, p. 223.

was the possession of land allowed to an agricultural laborer, to a mechanic, or indeed to any one except the king, the clergy, and the army.¹ The people at large were little better than beasts of burden; and all that was expected from them was an unremitting and unrequited labor. If they neglected their work, they were flogged; and the same punishment was frequently inflicted upon domestic servants, and even upon women.² These and similar regulations were well conceived; they were admirably suited to that vast social system which, because it was based on despotism, could only be upheld by cruelty. Hence it was that the industry of the whole nation being at the absolute command of a small part of it, there arose the possibility of rearing those vast edifices which inconsiderate observers admire as a proof of civilization,³ but which, in reality, are evidence of a state of things altogether depraved and unhealthy; a state in which the skill and the arts of an imperfect refinement injured those whom they ought to have benefited; so that the very resources which the people had created were turned against the people themselves.

That in such a society as this much regard should be paid to human suffering it would indeed be idle to expect.⁴ Still, we are

¹ Wilkinson's *Ancient Egyptians*, Vol. I, p. 263; Vol. II, p. 2; Sharpe's *History of Egypt*, Vol. II, p. 24.

² Wilkinson's *Ancient Egyptians*, Vol. II, pp. 41, 42; Vol. III, p. 69; Vol. IV, p. 131. Compare Ammianus Marcellinus, in Hamilton's *Ægyptiaca*, p. 309.

³ Vyse on the Pyramids, Vol. I, p. 61; Vol. II, p. 92.

⁴ "Ein König ahmte den andern nach, oder suchte ihn zu übertreffen; indess das gutmüthige Volk seine Lebenstage am Baue dieser Monumente verzehren musste. So entstanden wahrscheinlich die Pyramiden und Obelisken Aegyptens. Nur in den ältesten Zeiten wurden sie gebauet: denn die spätere Zeit und jede Nation, die ein nützlich Gewerbe treiben lernte, bauete keine Pyramiden mehr. Weit gefehlt also, dass Pyramiden ein Kennzeichen von der Glückseligkeit und Aufklärung des alten Aegyptens seyn sollten, sind sie ein unwidersprechliches Denkmal von dem Aberglauben und der Gedankenlosigkeit sowohl der Armen, die da baueten, als der Ehrgeizigen, die den Bau befahlen" (Herder, *Ideen zur Geschichte*, Vol. III, pp. 103, 104. See also p. 293, and some admirable remarks in Volney, *Voyage en Égypte*, Vol. I, pp. 240, 241). Even M. Bunsen, notwithstanding his admiration, says of one of the pyramids: "The misery of the people, already grievously oppressed, was aggravated by the construction of this gigantic building. . . . The bones of the oppressors of the people who for two whole generations harassed hundreds of thousands from day to day," etc. (Bunsen's *Egypt*, Vol. II, p. 176, a learned and enthusiastic work).

startled by the reckless prodigality with which, in Egypt, the upper classes squandered away the labor and the lives of the people. In this respect, as the monuments yet remaining abundantly prove, they stand alone and without a rival. We may form some idea of the almost incredible waste when we hear that two thousand men were occupied for three years in carrying a single stone from Elephantine to Sais;¹ that the Canal of the Red Sea alone cost the lives of a hundred and twenty thousand Egyptians;² and that to build one of the pyramids required the labor of three hundred and sixty thousand men for twenty years.³

If, passing from the history of Asia and Africa, we now turn to the New World, we shall meet with fresh proof of the accuracy of the preceding views. The only parts of America which before the arrival of the Europeans were in some degree civilized were Mexico and Peru;⁴ to which may probably be added that long and narrow tract which stretches from the south of Mexico to the Isthmus of Panama. In this latter country, which is now known as Central America, the inhabitants, aided by the fertility of the soil,⁵ seem to have worked out for themselves a certain amount of knowledge; since the ruins still extant prove the possession of a mechanical and architectural skill too considerable

¹ Καὶ τοῦτο ἐκόμζον μὲν ἐπ' ἑτα τρία, δισχιδιοὶ δὲ οἱ προσεττάχατο ἄνδρες ἀγωγέες (Herodotus, Book II, chap. clxxv). On the enormous weight of the stones which the Egyptians sometimes carried, see Bunsen's Egypt, Vol. I, p. 379; and as to the machines employed, and the use of inclined roads for the transit, see Vyse on the Pyramids, Vol. I, p. 197; Vol. III, pp. 14, 38.

² Wilkinson's Ancient Egyptians, Vol. I, p. 70; but this learned writer is unwilling to believe a statement so adverse to his favorite Egyptians. It is likely enough that there is some exaggeration; still no one can dispute the fact of an enormous and unprincipled waste of human life.

³ Τριάκοντα μὲν γὰρ καὶ ἑξ μυριάδες ἀνδρῶν, ὡς φασι, ταῖς τῶν ἔργων λειτουργίαις προσήδρευσαν, τὸ δὲ πᾶν κατασκευάσμα τέλος ἔσχε μόγῃς ἐτῶν εἰκοσι διεθόντων (Diod. Sic., Bibliothec. Hist., Book I, chap. lxiii, Vol. I, p. 188).

⁴ "When compared with other parts of the New World, Mexico and Peru may be considered as polished states" (History of America, Book VII, in Robertson's Works, p. 904). See, to the same effect, *Journal of Geographical Society*, Vol. V, p. 355.

⁵ Compare Squier's Central America, Vol. I, pp. 34, 244, 358, 421; Vol. II, p. 307, with *Journal of Geographical Society*, Vol. III, p. 59; Vol. VIII, pp. 319, 323.

to be acquired by any nation entirely barbarous.¹ Beyond this nothing is known of their history; but the accounts we have of such buildings as Copan, Palenque, and Uxmal make it highly probable that Central America was the ancient seat of a civilization in all essential points similar to those of India and Egypt; that is to say, similar to them in respect to the unequal distribution of wealth and power, and the thralldom in which the great body of the people consequently remained.²

But although the evidence from which we might estimate the former condition of Central America is almost entirely lost,³ we are more fortunate in regard to the histories of Mexico and Peru.

¹ Mr. Squier (Central America, Vol. II, p. 68), who explored Nicaragua, says of the statues, "The material, in every case, is a black basalt, of great hardness, which, with the best of modern tools, can only be cut with difficulty." Mr. Stephens (Central America, Vol. II, p. 355) found at Palenque "elegant specimens of art and models for study." See also Vol. III, pp. 276, 389, 406; Vol. IV, p. 293. Of the paintings at Chichen he says (Vol. IV, p. 311), "They exhibit a freedom of touch which could only be the result of discipline and training under masters." At Copan (Vol. I, p. 151), "it would be impossible, with the best instruments of modern times, to cut stones more perfectly." And at Uxmal (Vol. II, p. 431), "Throughout, the laying and polishing of the stones are as perfect as under the rules of the best modern masonry." Our knowledge of Central America is almost entirely derived from these two writers; and although the work of Mr. Stephens is much the more minute, Mr. Squier says (Vol. II, p. 306) what I believe is quite true, that until the appearance of his own book in 1853, the monuments in Nicaragua were entirely unknown. Short descriptions of the remains in Guatemala and Yucatan will be found in Larenaudière, *Mexique et Guatemala*, pp. 308-327, and in *Journal of Geographical Society*, Vol. III, pp. 60-63.

² See the remarks on Yucatan in Prichard's *Physical History of Mankind*, Vol. V, p. 348: "A great and industrious, though perhaps, as the writer above cited (Gallatin) observes, an enslaved population. Splendid temples and palaces attest the power of the priests and nobles, while as usual no trace remains of the huts in which dwelt the mass of the nation."

³ Dr. M'Culloh (*Researches concerning the Aboriginal History of America*, pp. 272-340) has collected from the Spanish writers some meager statements respecting the early condition of Central America; but of its social state and history properly so called nothing is known, nor is it even certain to what family of nations the inhabitants belonged, though a recent author can find "la civilisation guatemalienne ou mistecozapotèque et mayaquiche vivante pour nous encore dans les ruines de Mitla et de Palenque" (*Mexique et Guatemala*, par Larenaudière, p. 8, Paris, 1843). Dr. Prichard, too, refers the ruins in Central America to "the Mayan race." See Prichard on *Ethnology*, in *Report of British Association for 1847*, p. 252. But the evidence for these and similar statements is very unsatisfactory.

There are still existing considerable and authentic materials, from which we may form an opinion on the ancient state of those two countries, and on the nature and extent of their civilization. Before, however, entering upon this subject, it will be convenient to point out what those physical laws were which determined the localities of American civilization, or, in other words, why it was that in these countries alone society should have been organized into a fixed and settled system, while the rest of the New World was peopled by wild and ignorant barbarians. Such an inquiry will be found highly interesting, as affording further proof of the extraordinary, and indeed irresistible, force with which the powers of nature have controlled the fortunes of man.

The first circumstance by which we must be struck is that in America, as in Asia and Africa, all the original civilizations were seated in hot countries; the whole of Peru proper being within the southern tropic, the whole of Central America and Mexico within the northern tropic. How the heat of the climate operated on the social and political arrangements of India and Egypt I have attempted to examine, and it has, I trust, been proved that the result was brought about by diminishing the wants and requirements of the people, and thus producing a very unequal distribution of wealth and power. But, besides this, there is another way in which the average temperature of a country affects its civilization, and the discussion of which I have reserved for the present moment, because it may be more clearly illustrated in America than elsewhere. Indeed, in the New World the scale on which nature works, being much larger than in the Old, and her forces being more overpowering, it is evident that her operations on mankind may be studied with greater advantage than in countries where she is weaker, and where, therefore, the consequences of her movements are less conspicuous.

If the reader will bear in mind the immense influence which an abundant national food has been shown to exercise, he will easily understand how, owing to the pressure of physical phenomena, the civilization of America was, of necessity, confined to those parts where alone it was found by the discoverers of the New World. For, setting aside the chemical and geognostic varieties

of soil, it may be said that the two causes which regulate the fertility of every country are heat and moisture.¹ Where these are abundant, the land will be exuberant; where they are deficient, it will be sterile. This rule is, of course, in its application subject to exceptions, arising from physical conditions which are independent of it; but if other things are equal, the rule is inviolable. And the vast additions which, since the construction of isothermal lines, have been made to our knowledge of geographical botany, enable us to lay this down as a law of nature, proved not only by arguments drawn from vegetable physiology but also by a careful study of the proportions in which plants are actually distributed in different countries.²

A general survey of the continent of America will illustrate the connection between this law and the subject now before us. In the first place, as regards moisture, all the great rivers in the New World are on the eastern coast, none of them on the western. The causes of this remarkable fact are unknown;³ but it

¹ Respecting the connection between the vegetable productions of a country and its geognostic peculiarities, little is yet known; but the reader may compare Meyen's *Geography of Plants*, p. 64, with *Reports on Botany by the Ray Society*, 1846, pp. 70, 71. The chemical laws of soil are much better understood, and have a direct practical bearing on the use of manures. See Turner's *Chemistry*, Vol. II, pp. 1310-1314; Brande's *Chemistry*, Vol. I, p. 691; Vol. II, pp. 1867-1869; Balfour's *Botany*, pp. 116-122; Liebig and Kopp's *Reports*, Vol. II, pp. 315, 328; Vol. III, p. 463; Vol. IV, pp. 438, 442, 446.

² As to the influence of heat and moisture on the geographical distribution of plants, see Henslow's *Botany*, pp. 295-300, and Balfour's *Botany*, pp. 560-563. Meyen (*Geography of Plants*, p. 263) says, "I therefore, after allowing for local circumstances, bring the vegetation of islands also under that law of nature, according to which the number of species constantly increases with increasing heat and corresponding humidity." On the effect of temperature alone, compare a note in Erman's *Siberia*, Vol. I, pp. 64, 65, with *Reports on Botany by the Ray Society*, pp. 339, 340. In the latter work it is supposed that heat is the most important of all single agents; and though this is probably true, still the influence of humidity is immense. I may mention, as an instance of this, that it has been recently ascertained that the oxygen used by seeds during germination is not always taken from the air, but is obtained by decomposing water. See the curious experiments of Edwards and Colin in Lindley's *Botany*, Vol. II, pp. 261, 262, London, 1848; and on the direct nourishment which water supplies to vegetables, see Burdach's great work, *Traité de Physiologie*, Vol. IX, pp. 254, 398.

³ There is a difference between the watersheds of the eastern and western ranges, which explains this in part, but not entirely; and even if the explanation were more satisfactory than it is, it is too proximate to the phenomenon to have much scientific value, and must itself be referred to higher geological considerations.

is certain that neither in North nor in South America does one considerable river empty itself into the Pacific ; while on the opposite side there are numerous rivers, some of enormous magnitude, all of great importance, as the Negro, the La Plata, the San Francisco, the Amazon, the Orinoco, the Mississippi, the Alabama, the St. John, the Potomac, the Susquehanna, the Delaware, the Hudson, and the St. Lawrence. By this vast water system the soil is towards the east constantly irrigated ;¹ but towards the west there is in North America only one river of value, the Oregon ;² while in South America, from the Isthmus of Panama to the Straits of Magellan, there is no great river at all.

But as to the other main cause of fertility, namely, heat, we find in North America a state of things precisely the reverse. There we find that while the irrigation is on the east, the heat is on the west.³ This difference of temperature between the two coasts is probably connected with some great meteorological law ; for in the whole of the northern hemisphere the eastern part of continents and of islands is colder than the western.⁴ Whether,

¹ Of this irrigation some idea may be formed from an estimate that the Amazon drains an area of 2,500,000 square miles, that its mouth is ninety-six miles wide, and that it is navigable 2200 miles from its mouth (Somerville's *Physical Geography*, Vol. I, p. 423). Indeed, it is said in an *Essay on the Hydrography of South America* (*Journal of Geographical Society*, Vol. II, p. 250), that "with the exception of one short portage of three miles, water flows, and is for the most part navigable, between Buenos Ayres, in 35° south latitude, to the mouth of the Orinoco, in nearly 9° north." See also, on this river system, Vol. V, p. 93 ; Vol. X, p. 267. In regard to North America, Mr. Rogers (*Geology of North America*, p. 8, *Report of British Association for 1834*) says, "The area drained by the Mississippi and all its tributaries is computed at 1,099,000 square miles." Compare Richardson's *Arctic Expedition*, Vol. II, p. 164.

² The Oregon, or Columbia, as it is sometimes called, forms a remarkable botanical line, which is the boundary of the Californian flora. See *Reports on Botany by the Ray Society*, p. 113.

³ For proof that the mean temperature of the western coast of North America is higher than that of the eastern coast, see *Journal of Geographical Society*, Vol. IX, p. 380 ; Vol. XI, pp. 168, 216 ; Humboldt, *La Nouvelle Espagne*, Vol. I, pp. 42, 336 ; Richardson's *Arctic Expedition*, Vol. II, pp. 214, 218, 219, 259, 260. This is well illustrated by the botanical fact, that on the west coast the Coniferæ grow as high as 68° or 70° north latitude ; while on the east their northern limit is 60°. See an *Essay on the Morphology of the Coniferæ*, in *Reports on Botany by the Ray Society*, p. 8, which should be compared with Forry on the *Climate of the United States and its Endemic Influences*, p. 89, New York, 1842.

⁴ "Writers on climate have remarked that the eastern coasts of continents in the northern hemisphere have a lower mean temperature than the western

however, this is owing to some large and comprehensive cause, or whether each instance has a cause peculiar to itself, is an alternative, in the present state of knowledge, impossible to decide; but the fact is unquestionable, and its influence upon the early history of America is extremely curious. In consequence of it, the two great conditions of fertility have not been united in any part of the continent north of Mexico. The countries on the one side have wanted heat; those on the other side have wanted irrigation. The accumulation of wealth being thus impeded, the progress of society was stopped; and until, in the sixteenth century, the knowledge of Europe was brought to bear upon America, there is no instance of any people north of the twentieth parallel reaching even that imperfect civilization to which the inhabitants of India and of Egypt easily attained.¹ On the other hand, south of the twentieth parallel the continent suddenly changes its form, and, rapidly contracting, becomes a small strip of land, until it reaches the Isthmus of Panama. This narrow tract was the center of Mexican civilization; and a comparison of the preceding arguments will easily show why such was the case, for the peculiar configuration of the land secured a very large amount of coast, and thus gave to the southern part of North America the character of an island. Hence there arose one of the characteristics of an insular climate, namely, an

coasts" (Richardson on North American Zoölogy, p. 129, *Report of British Association for 1836*). See also *Report for 1841*, p. 28; Davis, China, Vol. III, pp. 140, 141; *Journal of Geographical Society*, Vol. XXII, p. 176.

¹ The little that is known of the early state of the North American tribes has been brought together by Dr. McCulloh in his learned work, *Researches concerning America*, pp. 119-146. He says (p. 121) that they "lived together without laws and civil regulations." In that part of the world the population has probably never been fixed; and we now know that the inhabitants of the northeast of Asia have at different times passed over to the northwest of America, as in the case of the Tschuktschi, who are found in both continents. Indeed, Dobell was so struck by the similarity between the North American tribes and some he met with nearly as far west as Tomsk that he believed their origin to be the same. See Dobell's *Travels in Kamchatka and Siberia*, 1830, Vol. II, p. 112. And on this question of intercourse between the two continents, compare Crantz' *History of Greenland*, Vol. I, pp. 259, 260, with Richardson's *Arctic Expedition*, Vol. I, pp. 362, 363, and Prichard's *Physical History of Mankind*, Vol. IV, pp. 458-463; Vol. V, pp. 371, 378.

increase of moisture, caused by the watery vapor which springs from the sea.¹ While, therefore, the position of Mexico near the equator gave it heat, the shape of the land gave it humidity; and this being the only part of North America in which these two conditions were united, it was likewise the only part which was at all civilized. There can be no doubt that if the sandy plains of California and southern Columbia, instead of being scorched into sterility, had been irrigated by the rivers of the east, or if the rivers of the east had been accompanied by the heat of the west, the result of either combination would have been that exuberance of soil by which, as the history of the world decisively proves, every early civilization was preceded. But inasmuch as, of the two elements of fertility, one was deficient in every part of America north of the twentieth parallel, it followed that, until that line was passed, civilization could gain no resting place; and there never has been found, and we may confidently assert never will be found, any evidence that even a single ancient nation in the whole of that enormous continent was able to make much progress in the arts of life, or organize itself into a fixed and permanent society.

Thus far as to the physical agents which controlled the early destinies of North America. But in reference to South America, a different train of circumstances came into play; for the law by virtue of which the eastern coasts are colder than the western is not only inapplicable to the southern hemisphere but is replaced by another law precisely the reverse. North of the equator the east is colder than the west; south of the equator the east is hotter than the west. If, now, we connect this

¹ From general physical considerations we should suppose a relation between amount of rain and extent of coast; and in Europe, where alone we have extensive meteorological records, the connection has been proved statistically. "If the quantity of rain that falls in different parts of Europe is measured, it is found to be less, other things being equal, as we recede from the seashore" (Kaemtz' *Meteorology*, 1845, p. 139). Compare pp. 91, 94. Hence, no doubt, the greater rarity of rain as we advance north from Mexico. "Au nord du 20°, surtout depuis les 22° au 30° de latitude, les pluies, qui ne durent que pendant les mois de juin, de juillet, d'août et de septembre, sont peu fréquentes dans l'intérieur du pays" (Humboldt, *Nouvelle Espagne*, Vol. I, p. 46).

fact with what has been noticed respecting the vast river system which distinguishes the east of America from the west, it becomes evident that in South America there exists that coöperation of heat and humidity in which North America is deficient. The result is, that the soil in the eastern part of South America is remarkable for its exuberance not only within the tropic but considerably beyond it; the south of Brazil, and even part of Uruguay, possessing a fertility not to be found in any country of North America situated under a corresponding latitude.

On a hasty view of the preceding generalizations it might be expected that the eastern side of South America, being thus richly endowed by nature,¹ would have been the seat of those civilizations which, in other parts of the world, similar causes produced. But if we look a little further, we shall find that what has just been pointed out by no means exhausts even the physical bearings of this subject, and that we must take into consideration a third great agent, which has sufficed to neutralize the natural results of the other two, and to retain in barbarism the inhabitants of what otherwise would have been the most flourishing of all the countries of the New World.

The agent to which I allude is the trade wind,—a striking phenomenon, by which, as we shall hereafter see, all the civilizations anterior to those of Europe were greatly and injuriously influenced. This wind covers no less than 56° of latitude,—28° north of the equator and 28° south of it.² In this large tract, which comprises some of the most fertile countries in the world, the

¹ Mr. Darwin, who has written one of the most valuable works ever published on South America, was struck by this superiority of the eastern coast; and he mentions that "fruits which ripen well and are very abundant, such as the grape and fig, in latitude 41° on the east coast, succeed very poorly in a lower latitude on the opposite side of the continent" (Darwin's *Journal of Researches*, p. 268, London, 1840). Compare Meyen's *Geography of Plants*, pp. 25, 188. So that the proposition of Daniell (*Meteorological Essays*, p. 104, sec. xiv) is expressed too generally, and should be confined to continents north of the equator.

² The trade winds sometimes reach the thirtieth parallel. See Daniell's *Meteorological Essays*, p. 469. Dr. Traill (*Physical Geography*, p. 200, Edinburgh, 1838), says, "They extend to about 30° on each side of the equator." But I believe they are rarely found so high, though Robertson is certainly wrong in supposing that they are peculiar to the tropics (*History of America*, Book IV, in Robertson's Works, p. 781).

trade wind blows, during the whole year, either from the northeast or from the southeast.¹ The causes of this regularity are now well understood, and are known to depend partly on the displacement of air at the equator, and partly on the motion of the earth; for the cold air from the poles is constantly flowing towards the equator, and thus producing northerly winds in the northern hemisphere and southerly winds in the southern. These winds are, however, deflected from their natural course by the movement of the earth, as it revolves on its axis from west to east. And as the rotation of the earth is, of course, more rapid at the equator than elsewhere, it happens that in the neighborhood of the equator the speed is so great as to outstrip the movements of the atmosphere from the poles, and forcing them into another direction, gives rise to those easterly currents which are called trade winds.² What, however, we are now rather concerned with is not so much an explanation of the trade winds as an account of the way in which this great physical phenomenon is connected with the history of South America.

The trade wind, blowing on the eastern coast of South America, and proceeding from the east, crosses the Atlantic Ocean, and

¹ "In the northern hemisphere the trade wind blows from the northeast, and in the southern from the southeast" (Meyen's *Geography of Plants*, p. 42). Compare Walsh's *Brazil*, Vol. I, p. 112; Vol. II, p. 494; and on the "tropical east wind" of the Gulf of Mexico, see Forry's *Climate of the United States*, p. 206. Dr. Forry says that it has given to the growth of the trees "an inclination from the sea."

² Respecting the causes of the trade winds, see Somerville's *Connection of the Physical Sciences*, pp. 136, 137; Leslie's *Natural Philosophy*, p. 518; Daniell's *Meteorological Essays*, pp. 44, 102, 476-481; Kaemtz' *Meteorology*, pp. 37-39; Prout's *Bridgewater Treatise*, pp. 254-256. The discovery of the true theory is often ascribed to Mr. Daniell; but Hadley was the real discoverer. See note in Prout, p. 257. The monsoons, which popular writers frequently confuse with the trade winds, are said to be caused by the predominance of land, and by the difference between its temperature and that of the sea. See Kaemtz, pp. 42-45. On what may be called the conversion of the trades into monsoons, according to the laws very recently promulgated by M. Dove, see *Report of British Association for 1847* (*Transactions of Sections*, p. 30), and *Report for 1848*, p. 94. The monsoons are noticed in Humboldt's *Cosmos*, Vol. II, p. 485; *Asiatic Researches*, Vol. XVIII, Part I, p. 261; Thirlwall's *History of Greece*, Vol. VII, pp. 13, 55; *Journal of Geographical Society*, Vol. II, p. 90; Vol. IV, pp. 8-9, 148, 149, 169; Vol. XI, p. 162; Vol. XV, pp. 146-149; Vol. XVI, p. 185; Vol. XVIII, pp. 67, 68; Vol. XXIII, p. 112; Low's *Sarawak*, p. 30.

therefore reaches the land surcharged with the vapors accumulated in its passage. These vapors, on touching the shore, are, at periodical intervals, condensed into rain; and as their progress westward is checked by that gigantic chain of the Andes, which they are unable to pass,¹ they pour the whole of their moisture on Brazil, which, in consequence, is often deluged by the most destructive torrents.² This abundant supply, being aided by that vast river system peculiar to the eastern part of America, and being also accompanied by heat, has stimulated the soil into an activity unequaled in any other part of the world.³ Brazil, which is nearly as large as the whole of Europe, is covered with a vegetation of incredible profusion. Indeed, so rank and luxuriant is the growth that nature seems to riot in the very wantonness of power. A great part of this immense country is filled with dense and tangled forests, whose noble trees, blossoming in unrivaled beauty, and exquisite with a thousand hues, throw out their produce in endless prodigality. On their summit are perched birds of gorgeous plumage, which nestle in their dark and lofty recesses. Below, their base and trunks are crowded with brushwood, creeping plants, innumerable parasites, all swarming with life. There, too, are myriads of insects of every variety; reptiles

¹ Lyell's *Principles of Geology*, pp. 201, 714, 715; see also Somerville's *Physical Geography*, Vol. II, p. 71. And on this confining power of the Cordillera of the Andes, see Azara, *Voyages dans l'Amérique Méridionale*, Vol. I, p. 33. According to Dr. Tschudi, the eastern chain is properly the Andes, and the western the Cordilleras; but this distinction is rarely made (Tschudi's *Travels in Peru*, p. 290).

² On the rain of Brazil, see Daniell's *Meteorological Essays*, p. 335; Darwin's *Journal*, pp. 11, 33; Spix and Martius' *Travels in Brazil*, Vol. II, p. 113; Gardner's *Travels in Brazil*, pp. 53, 99, 114, 175, 233, 394.

³ Dr. Gardner, who looked at these things with the eye of a botanist, says that near Rio de Janeiro the heat and moisture are sufficient to compensate even the poorest soil, so that "rocks, on which scarcely a trace of earth is to be observed, are covered with vellozias, tillandsias, melastomaceæ, cacti, orchideæ, and ferns, and all in the vigor of life" (Gardner's *Travels in Brazil*, p. 9). See also on this combination (Walsh's *Brazil*, Vol. II, pp. 297, 298), a curious description of the rainy season: "For eight or nine hours a day, during some weeks, I never had a dry shirt on me; and the clothes I divested myself of at night I put on quite wet in the morning. When it did not rain, which was very rare, there shone out in some places a burning sun; and we went smoking along, the wet exhaling by the heat as if we were dissolving into vapor."

of strange and singular form; serpents and lizards, spotted with deadly beauty,—all of which find means of existence in this vast workshop and repository of nature. And that nothing may be wanting to this land of marvels, the forests are skirted by enormous meadows, which, reeking with heat and moisture, supply nourishment to countless herds of wild cattle that browse and fatten on their herbage; while the adjoining plains, rich in another form of life, are the chosen abode of the subtlest and most ferocious animals, which prey on each other, but which it might almost seem no human power can hope to extirpate.¹

Such is the flow and abundance of life by which Brazil is marked above all the other countries of the earth.² But amid this pomp and splendor of nature no place is left for man. He is reduced to insignificance by the majesty with which he is surrounded. The forces that oppose him are so formidable that he has never been able to make head against them, never able to rally against their accumulated pressure. The whole of Brazil, notwithstanding its immense apparent advantages, has always remained entirely uncivilized,—its inhabitants wandering savages, incompetent to resist those obstacles which the very bounty of nature had put in their way. For the natives, like every people

¹ On the natural history of Brazil I have compared a few notices in Swainson's *Geography of Animals*, pp. 75-87, with Cuvier, *Règne Animal*, Vol. I, p. 460; Vol. II, pp. 28, 65, 66, 89; Vol. IV, pp. 51, 75, 258, 320, 394, 485, 561; Vol. V, pp. 40, 195, 272, 334, 553; Azara, *Amérique Méridionale*, Vol. I, pp. 244-388, and the greater part of Vols. III and IV; Winckler, *Geschichte der Botanik*, pp. 378, 576-578; Southey's *History of Brazil*, Vol. I, p. 27; Vol. III, pp. 315, 823; Gardner's *Brazil*, pp. 18, 32-34, 41-44, 131, 330; Spix and Martius' *Brazil*, Vol. I, pp. 207-209, 238-248; Vol. II, pp. 131, 160-163. And as to the forests, which are among the wonders of the world, see Somerville's *Physical Geography*, Vol. II, pp. 204-206; Prichard's *Physical History*, Vol. V, p. 497; Darwin's *Journal*, pp. 11, 24; Walsh's *Brazil*, Vol. I, p. 145; Vol. II, pp. 29, 30, 253.

² This extraordinary richness has excited the astonishment of all who have seen it. Mr. Walsh, who has traveled in some very fertile countries, mentions "the exceeding fecundity of nature which characterizes Brazil" (*Walsh's Brazil*, Vol. II, p. 19). And a very eminent naturalist, Mr. Darwin, says (*Journal*, p. 29), "In England, any person fond of natural history enjoys in his walks a great advantage, by always having something to attract his attention; but in these fertile climates, teeming with life, the attractions are so numerous that he is scarcely able to walk at all."

in the infancy of society, are averse to enterprise; and being unacquainted with the arts by which physical impediments are removed, they have never attempted to grapple with the difficulties that stopped their social progress. Indeed, those difficulties are so serious that during more than three hundred years the resources of European knowledge have been vainly employed in endeavoring to get rid of them. Along the coast of Brazil there has been introduced from Europe a certain amount of that civilization which the natives by their own efforts could never have reached. But such civilization, in itself very imperfect, has never penetrated the recesses of the country; and in the interior there is still found a state of things similar to that which has always existed. The people, ignorant, and therefore brutal, practicing no restraint and recognizing no law, continue to live on in their old and inveterate barbarism.¹ In their country the physical causes are so active, and do their work on a scale of such unrivaled magnitude, that it has hitherto been found impossible to escape from the effects of their united action. The progress of agriculture is stopped by impassable forests, and the harvests are destroyed by innumerable insects.² The mountains are too high to scale; the rivers are too wide to bridge; everything is contrived

¹ Azara (*Amérique Méridionale*, Vol. II, pp. 1-168) gives a curious but occasionally a disgusting account of the savage natives in that part of Brazil south of 16°, to which his observations were limited. And as to the inhabitants of other parts, see Henderson's *History of Brazil*, pp. 28, 29, 107, 173, 248, 315, 473; M'Culloh's *Researches concerning America*, p. 77; and the more recent account of Dr. Martius, in *Journal of Geographical Society*, Vol. II, pp. 191-199. Even in 1817 it was rare to see a native in Rio de Janeiro (Spix and Martius' *Travels in Brazil*, Vol. I, p. 142); and Dr. Gardner (*Travels in Brazil*, pp. 61, 62) says that "more than one nation of Indians in Brazil" have returned to that savage life from which they had apparently been reclaimed.

² Sir C. Lyell (*Principles of Geology*, p. 682) notices "the incredible number of insects which lay waste the crops in Brazil"; and Mr. Swainson, who had traveled in that country, says, "The red ants of Brazil are so destructive, and at the same time so prolific, that they frequently dispute possession of the ground with the husbandman, defy all his skill to extirpate their colonies, and fairly compel him to leave his fields uncultivated" (Swainson on the *Geography and Classification of Animals*, p. 87). See more about these insects in Darwin's *Journal*, pp. 37-43; Southey's *History of Brazil*, Vol. I, pp. 144, 256, 333-335, 343; Vol. II, pp. 365, 642; Vol. III, p. 876; Spix and Martius' *Travels in Brazil*, Vol. I, p. 259; Vol. II, p. 117; Cuvier, *Règne Animal*, Vol. IV, p. 320.

to keep back the human mind and repress its rising ambition. It is thus that the energies of nature have hampered the spirit of man. Nowhere else is there so painful a contrast between the grandeur of the external world and the littleness of the internal. And the mind, cowed by this unequal struggle, has not only been unable to advance, but without foreign aid it would undoubtedly have receded. For even at present, with all the improvements constantly introduced from Europe, there are no signs of real progress; while notwithstanding the frequency of colonial settlements, less than one fiftieth of the land is cultivated.¹ The habits of the people are as barbarous as ever; and as to their numbers, it is well worthy of remark that Brazil, the country where, of all others, physical resources are most powerful, where both vegetables and animals are most abundant, where the soil is watered by the noblest rivers, and the coast studded by the finest harbors, — this immense territory, which is more than twelve times the size of France, contains a population not exceeding six millions of people.²

These considerations sufficiently explain why it is that in the whole of Brazil there are no monuments even of the most imperfect civilization; no evidence that the people had, at any period, raised themselves above the state in which they were found when their country was first discovered. But immediately opposite to Brazil there is another country, which, though situated in the same continent and lying under the same latitude, is subjected to different physical conditions, and therefore was the scene of different social results. This is the celebrated kingdom of Peru,

¹ The cultivated land is estimated at from $1\frac{1}{2}$ to 2 per cent. See M'Culloch's *Geographical Dictionary*, 1849, Vol. I, p. 430.

² During the present century the population of Brazil has been differently stated at different times, the highest computation being seven million, and the lowest four million. Compare Humboldt, *Nouvelle Espagne*, Vol. II, p. 855; Gardner's *Brazil*, p. 12; M'Culloch's *Geographical Dictionary*, 1849, Vol. I, pp. 430, 434. Mr. Walsh describes Brazil as "abounding in lands of the most exuberant fertility, but nearly destitute of inhabitants" (*Walsh's Brazil*, Vol. I, p. 248). This was in 1828 and 1829, since which the European population has increased; but, on the whole, six million seems to be a fair estimate of what can only be known approximately. In Alison's *History*, Vol. X, p. 229, the number given is five million, but the area also is rather understated.

which included the whole of the southern tropic, and which, from the circumstances just stated, was naturally the only part of South America where anything approaching to civilization could be attained. In Brazil the heat of the climate was accompanied by a twofold irrigation, arising first, from the immense river system incidental to the eastern coast; and secondly, from the abundant moisture deposited by the trade winds. From this combination there resulted that unequaled fertility which, so far as man was concerned, defeated its own ends, stopping his progress by an exuberance which, had it been less excessive, it would have aided. For, as we have clearly seen, when the productive powers of nature are carried beyond a certain point, the imperfect knowledge of uncivilized men is unable to cope with them, or in any way turn them to their own advantage. If, however, those powers, being very active, are nevertheless confined within manageable limits, there arises a state of things similar to that noticed in Asia and Africa, where the profusion of nature, instead of hindering social progress, favored it, by encouraging that accumulation of wealth, without some share of which progress is impossible.

In estimating, therefore, the physical conditions by which civilization was originally determined, we have to look, not merely at the exuberance, but also at what may be called the manageability of nature; that is, we have to consider the ease with which the resources may be used as well as the number of the resources themselves. Applying this to Mexico and Peru, we find that they were the countries of America where this combination most happily occurred. For though their resources were much less numerous than those of Brazil, they were far more easy to control, while at the same time the heat of the climate brought into play those other laws by which, as I have attempted to show, all the early civilizations were greatly influenced. It is a very remarkable fact, which, I believe, has never been observed, that even in reference to latitude the present limit of Peru to the south corresponds with the ancient limit of Mexico to the north; while, by a striking but to me perfectly natural coincidence, both these boundaries are reached before the tropical line

is passed, the boundary of Mexico being 21° north latitude, that of Peru $21\frac{1}{2}^{\circ}$ south latitude.¹

Such is the wonderful regularity which history, when comprehensively studied, presents to our view. And if we compare Mexico and Peru with those countries of the Old World which have been already noticed, we shall find, as in all the civilizations anterior to those of Europe, that their social phenomena were subordinate to their physical laws. In the first place, the characteristics of their national food were precisely those met with in the most flourishing parts of Asia and Africa. For although few of the nutritious vegetables belonging to the Old World were found in the New, their place was supplied by others exactly analogous to rice and dates,—that is to say, marked by the same abundance, by the same facility of growth, and by the same exuberant returns, therefore followed by the same social results. In Mexico and Peru one of the most important articles of food has always been maize, which we have every reason to believe was peculiar to the American continent.² This, like rice and dates, is eminently the product of a hot climate; and although it is said to grow at an elevation of upwards of seven thousand feet,³

¹ Vidica being the most southerly point of the present Peruvian coast; though the conquests of Peru, incorporated with the empire, extended far into Chili, and within a few degrees of Patagonia. In regard to Mexico, the northern limit of the empire was 21° on the Atlantic coast, and 19° on the Pacific (Prescott's *History of Mexico*, Vol. I, p. 2).

² A question has been raised as to the Asiatic origin of maize (Reynier, *Économie des Arabes*, pp. 94, 95). But later and more careful researches seem to have ascertained beyond much doubt that it was unknown before America was discovered. Compare Meyen's *Geography of Plants*, pp. 44, 303, 304; Walckenaer's note in Azara, *Amérique Méridionale*, Vol. I, p. 149; Cuvier, *Progrès des Sciences Naturelles*, Vol. II, p. 354; Cuvier, *Éloges Historiques*, Vol. II, p. 178; Loudon's *Encyclopædia of Agriculture*, p. 829; M'Culloch's *Dictionary of Commerce*, 1849, p. 831. The casual notices of maize by Ixtlilxochitl, the native Mexican historian, shows its general use as an article of food before the arrival of the Spaniards. See Ixtlilxochitl, *Histoire des Chichimèques*, Vol. I, pp. 53, 64, 240; Vol. II, p. 19.

³ "Maize, indeed, grows to the height of seventy-two hundred feet above the level of the sea, but only predominates between three thousand and six thousand of elevation" (Lindley's *Vegetable Kingdom*, 1847, p. 112). This refers to the tropical parts of South America; but the Zea Mais is said to have been raised on the slopes of the Pyrenees "at an elevation of three thousand to four thousand feet." See Austen on the Forty Days' Maize, in *Report of British Association for 1849, Transactions of Sections*, p. 68.

it is rarely seen beyond the fortieth parallel,¹ and its exuberance rapidly diminishes with the diminution of temperature. Thus, for example, in New California its average yield is seventy or eighty fold;² but in Mexico proper the same grain yields three or four hundred fold, and, under very favorable circumstances, even eight hundred fold.³

A people who derived their sustenance from a plant of such extraordinary fecundity had little need to exercise their industrious energies; while at the same time they had every opportunity of increasing their numbers, and thus producing a train of social and political consequences similar to those which I have noticed in India and in Egypt. Besides this, there were, in addition to maize, other kinds of food to which the same remarks are applicable. The potato, which in Ireland has brought about such injurious effects by stimulating the growth of population, is said to be indigenous to Peru; and although this is denied by a very high authority,⁴ there is, at all events, no doubt that it was found there in great abundance when the country was first discovered

¹ M. Meyen (*Geography of Plants*, p. 302) and Mr. Balfour (*Botany*, p. 567) suppose that in America 40° is about its limit; and this is the case in regard to its extensive cultivation; but it is grown certainly as high as 52°, perhaps as high as 54°, north latitude. See Richardson's *Arctic Expedition*, 1851, Vol. II, pp. 49, 224.

² "Sous la zone tempérée, entre les 33° et 38° degrés de latitude, par exemple dans la Nouvelle Californie, le maïs ne produit, en général, année commune, que 70 à 80 grains pour un" (Humboldt, *Nouvelle Espagne*, Vol. II, p. 375).

³ "La fécondité du Tlaolli, ou maïs mexicain, est au-delà de tout ce que l'on peut imaginer en Europe. La plante, favorisée par de fortes chaleurs et par beaucoup d'humidité, acquiert une hauteur de deux à trois mètres. Dans les belles plaines qui s'étendent depuis San Juan del Rio à Queretaro, par exemple dans les terres de la grande métairie de l'Esperanza, une fanègue de maïs en produit quelquefois huit cents. Des terrains fertiles en donnent, année commune, trois à quatre cents" (Humboldt, *Nouvelle Espagne*, Vol. II, p. 374). Nearly the same estimate is given by Mr. Ward. See Ward's *Mexico*, Vol. I, p. 32; Vol. II, p. 230. In Central America (Guatemala) maize returns three hundred for one (Mexique et Guatemala, par Larenaudière, p. 257).

⁴ "La pomme de terre n'est pas indigène au Pérou" (Humboldt, *Nouvelle Espagne*, Vol. II, p. 400). On the other hand, Cuvier (*Histoire des Sciences Naturelles*, Part II, p. 185) peremptorily says, "Il est impossible de douter qu'elle ne soit originaire du Pérou." See also his *Éloges Historiques*, Vol. II, p. 171. Compare Winckler, *Gesch. der Botanik*, p. 92: "Von einem gewissen Çarate unter den Gewächsen Peru's mit dem Namen papas aufgeführt."

by the Europeans.¹ In Mexico potatoes were unknown till the arrival of the Spaniards; but both Mexicans and Peruvians lived to a great extent on the produce of the banana, — a vegetable whose reproductive powers are so extraordinary that nothing but the precise and unimpeachable testimony of which we are possessed could make them at all credible. This remarkable plant is, in America, intimately connected with the physical laws of climate, since it is an article of primary importance for the subsistence of man whenever the temperature passes a certain point.² Of its nutritive powers it is enough to say that an acre sown with it will support more than fifty persons; whereas the same amount of land sown with wheat in Europe will only support two persons.³ As to the exuberance of its growth, it is calculated that, other circumstances remaining the same, its produce is forty-four times greater than that of potatoes, and a hundred and thirty-three times greater than that of wheat.⁴

It will now be easily understood why it was that, in all important respects, the civilizations of Mexico and Peru were strictly analogous to those of India and Egypt. In these four countries, as well as in a few others in southern Asia and Central America, there existed an amount of knowledge, despicable indeed if tried

¹ And has been used ever since for food. On the Peruvian potato, compare Tschudi's *Travels in Peru*, pp. 178, 368, 386; Ulloa's *Voyage to South America*, Vol. I, pp. 287, 288. In southern Peru, at the height of thirteen thousand or fourteen thousand feet, a curious process takes place, the starch of the potato being frozen into saccharine. See a valuable paper by Mr. Bollaert in *Journal of Geographical Society*, Vol. XXI, p. 119.

² Humboldt (*Nouvelle Espagne*, Vol. II, p. 359) says, "Partout où la chaleur moyenne de l'année excède vingt-quatre degrés centigrades, le fruit du bananier est un objet de culture du plus grand intérêt pour la subsistance de l'homme." Compare Bullock's *Mexico*, p. 281.

³ McCulloch's *Geographical Dictionary*, 1849, Vol. II, p. 315.

⁴ "Je doute qu'il existe une autre plante sur le globe, qui, sur un petit espace de terrain, puisse produire une masse de substance nourrissante aussi considérable." . . . "Le produit des bananes est par conséquent à celui du froment comme 133 : 1 — à celui des pommes de terre comme 44 : 1" (Humboldt, *Nouvelle Espagne*, Vol. II, pp. 362, 363). See also Prout's *Bridgewater Treatise*, p. 333, edit. 1845; Prescott's *Peru*, Vol. I, pp. 131, 132; Prescott's *Mexico*, Vol. I, p. 114. Earlier notices, but very imperfect ones, of this remarkable vegetable may be found in Ulloa's *South America*, Vol. I, p. 74; and in Boyle's *Works*, Vol. III, p. 590.

by an European standard, but most remarkable if contrasted with the gross ignorance which prevailed among the adjoining and contemporary nations. But in all of them there was the same inability to diffuse even that scanty civilization which they really possessed; there was the same utter absence of anything approaching to the democratic spirit; there was the same despotic power on the part of the upper classes, and the same contemptible subservience on the part of the lower. For, as we have clearly seen, all these civilizations were affected by certain physical causes, which, though favorable to the accumulation of wealth, were unfavorable to a just subdivision of it. And as the knowledge of men was still in its infancy,¹ it was found impossible to struggle against these physical agents, or prevent them from producing those effects on the social organization which I have attempted to trace. Both in Mexico and in Peru the arts, and particularly those branches of them which minister to the luxury of the wealthy classes, were cultivated with great success. The houses of the higher ranks were filled with ornaments and utensils of admirable workmanship; their chambers were hung with splendid tapestries; their dresses and their personal decorations betrayed an almost incredible expense; their jewels were of exquisite and varied form; their rich and flowing robes embroidered with the rarest feathers, collected from the most distant parts of the empire, — all supplying evidence of the possession of unlimited wealth, and of the ostentatious prodigality with which that wealth was wasted.² Immediately below this class came the people; and

¹ The only science with which they had much acquaintance was astronomy, which the Mexicans appear to have cultivated with considerable success. Compare the remark of La Place, in Humboldt, *Nouvelle Espagne*, Vol. I, p. 92, with Prichard's *Physical History*, Vol. V, pp. 323, 329; M'Culloh's *Researches*, pp. 201–225; Larenaudière's *Mexique*, pp. 51, 52; Humboldt's *Cosmos*, Vol. IV, p. 456; *Journal of Geographical Society*, Vol. VII, p. 3. However, their astronomy, as might be expected, was accompanied by astrology. See Ixtlilxochitl, *Histoire des Chichimèques*, Vol. I, p. 168; Vol. II, p. 94, 111.

² The works of art produced by the Mexicans and Peruvians are underrated by Robertson, who, however, admits that he had never seen them (*History of America*, Book VII, in Robertson's *Works*, pp. 909, 920). But during the present century considerable attention has been paid to this subject; and in addition to the evidence of skill and costly extravagance collected by Mr. Prescott (*History*

what their condition was may be easily imagined. In Peru the whole of the taxes were paid by them, the nobles and the clergy being altogether exempt.¹ But as in such a state of society it was impossible for the people to accumulate property, they were obliged to defray the expenses of government by their personal labor, which was placed under the entire command of the state.² At the same time the rulers of the country were well aware that, with a system like this, feelings of personal independence were incompatible; they therefore contrived laws by which, even in the most minute matters, freedom of action was controlled. The people were so shackled that they could neither change their residence nor alter their clothes without permission from the governing powers. To each man the law prescribed the trade he was to follow, the dress he was to wear, the wife he was to marry, and the amusements he was to enjoy.³ Among the Mexicans the

of Peru, Vol. I, pp. 28, 142; History of Mexico, Vol. I, pp. 27, 28, 122, 256, 270, 307; Vol. II, pp. 115, 116), I may refer to the testimony of M. Humboldt, the only traveler in the New World who has possessed a competent amount of physical as well as historical knowledge (Humboldt, *Nouvelle Espagne*, Vol. II, p. 483, and elsewhere). Compare Mr. Pentland's observation on the tombs in the neighborhood of Titicaca (*Journal of Geographical Society*, Vol. X, p. 554) with M'Culloh's *Researches*, pp. 364-366; Larenaudière's *Mexique*, pp. 41, 42, 66; Ulloa's *South America*, Vol. I, pp. 465, 466.

¹ "The members of the royal house, the great nobles, even the public functionaries, and the numerous body of the priesthood, were all exempt from taxation. The whole duty of defraying the expenses of the government belonged to the people" (Prescott's *History of Peru*, Vol. I, p. 56).

² Ondegardo emphatically says, "Solo el trabajo de las personas era el tributo que se dava, porque ellos no poseian otra cosa" (Prescott's *Peru*, Vol. I, p. 57). Compare M'Culloh's *Researches*, p. 359. In Mexico the state of things was just the same: "Le petit peuple, qui ne possédait point de biens-fonds, et qui ne faisait point de commerce, payait sa part des taxes en travaux de différents genres; c'était par lui que les terres de la couronne étaient cultivées, les ouvrages publics exécutés, et les diverses maisons appartenantes à l'empereur construites ou entretenues" (Larenaudière's *Mexique*, p. 39).

³ Mr. Prescott notices this with surprise, though, under the circumstances, it was in truth perfectly natural. He says (*History of Peru*, Vol. I, p. 159), "Under this extraordinary polity a people, advanced in many of the social refinements, well skilled in manufactures and agriculture, were unacquainted, as we have seen, with money. They had nothing that deserved to be called property. They could follow no craft, could engage in no labor, no amusement, but such as was specially provided by law. They could not change their residence or their dress without a license

course of affairs was similar, the same physical conditions being followed by the same social results. In the most essential particular for which history can be studied, namely, the state of the people, Mexico and Peru are the counterpart of each other. For though there were many minor points of difference,¹ both were agreed in this, that there were only two classes, — the upper class being tyrants, and the lower class being slaves. This was the state in which Mexico was found when it was discovered by the Europeans,² and towards which it must have been tending from the earliest period. And so insupportable had all this become that we know, from the most decisive evidence, that the general disaffection it produced among the people was one of the causes which, by facilitating the progress of the Spanish invaders, hastened the downfall of the Mexican empire.³

The further this examination is carried, the more striking becomes the similarity between those civilizations which flourished anterior to what may be called the European epoch of the human mind. The division of a nation into castes would be impossible in the great European countries; but it existed from a remote antiquity in Egypt, in India, and apparently in Persia.⁴ The very

from the government. They could not even exercise the freedom which is conceded to the most abject in other countries, — that of selecting their own wives."

¹ The Mexicans being, as Prichard says (*Physical History*, Vol. V, p. 467), of a more cruel disposition than the Peruvians; but our information is too limited to enable us to determine whether this was mainly owing to physical causes or to social ones. Herder preferred the Peruvian civilization, "*der gebildetste Staat dieses Welttheils, Peru*" (*Ideen zur Geschichte der Menschheit*, Vol. I, p. 33).

² See in Humboldt, *Nouvelle Espagne*, Vol. I, p. 101, a striking summary of the state of the Mexican people at the time of the Spanish conquest. See also *History of America*, Book VII, in Robertson's Works, p. 907.

³ Prescott's *History of the Conquest of Mexico*, Vol. I, p. 34. Compare a similar remark on the invasion of Egypt in Bunsen's *Egypt*, Vol. II, p. 414.

⁴ That there were castes in Persia is stated by Firdausi; and his assertion, putting aside its general probability, ought to outweigh the silence of the Greek historians, who, for the most part, knew little of any country except their own. According to Malcolm, the existence of caste in the time of Jemsheed, is confirmed by "some Mahometan authors"; but he does not say who they were (*Malcolm's History of Persia*, Vol. I, pp. 505, 506). Several attempts have been made, but very unsuccessfully, to ascertain the period in which castes were first instituted. Compare *Asiatic Researches*, Vol. VI, p. 251; Heeren's *African Nations*, Vol. II, p. 121; Bunsen's *Egypt*, Vol. II, p. 410; Rammohun Roy on the *Veds*, p. 269.

same institution was rigidly enforced in Peru;¹ and what proves how consonant it was to that stage of society is that in Mexico, where castes were not established by law, it was nevertheless a recognized custom that the son should follow the occupation of his father.² This was the political symptom of that stationary and conservative spirit, which, as we shall hereafter see, has marked every country in which the upper classes have monopolized power. The religious symptom of the same spirit was displayed in that inordinate reverence for antiquity, and in that hatred of change, which the greatest of all the writers on America has well pointed out as an analogy between the natives of Mexico and those of Hindustan.³ To this may be added, that those who have studied the history of the ancient Egyptians have observed among that people a similar tendency. Wilkinson, who is well known to have paid great attention to their monuments, says that they were more unwilling than any other nation to alter their religious worship;⁴ and Herodotus, who traveled in their

¹ Prescott's History of Peru, Vol. I, pp. 143, 156.

² Prescott's History of Mexico, Vol. I, p. 124.

³ "Les Américains, comme les habitants de l'Indoustan, et comme tous les peuples qui ont gémi longtemps sous le despotisme civil et religieux, tiennent avec une opiniâtreté extraordinaire à leurs habitudes, à leurs mœurs, à leurs opinions. . . . Au Mexique, comme dans l'Indoustan, il n'était pas permis aux fidèles de changer la moindre chose aux figures des idoles. Tout ce qui appartenait au rite des Aztèques et des Hindous étoit assujéti à des lois immuables" (Humboldt, Nouvelle Espagne, Vol. I, pp. 95, 97). Turgot (Œuvres, Vol. II, pp. 226, 313, 314) has some admirable remarks on this fixity of opinion natural to certain states of society. See also Herder's Ideen zur Geschichte, Vol. III, pp. 34, 35; and for other illustrations of this unliancy of thought, and adherence to old customs, which many writers suppose to be an eastern peculiarity, but which is far more widely spread, and is, as Humboldt clearly saw, the result of an unequal distribution of power, compare Turner's Embassy to Tibet, p. 41; Forbes' Oriental Memoirs, Vol. I, pp. 15, 164; Vol. II, p. 236; Mill's History of India, Vol. II, p. 214; Elphinstone's History of India, p. 48; Otter's Life of Clarke, Vol. II, p. 109; *Transactions of Asiatic Society*, Vol. II, p. 64; *Journal of Asiatic Society*, Vol. VIII, p. 116.

⁴ "How scrupulous the Egyptians were, above all people, in permitting the introduction of new customs in matters relating to the gods" (Wilkinson's Ancient Egyptians, Vol. III, p. 262). Compare p. 275. Thus, too, M. Bunsen notices "the tenacity with which the Egyptians adhered to old manners and customs" (Bunsen's Egypt, Vol. II, p. 64). See also some remarks on the difference between this spirit and the love of novelty among the Greeks, in Ritter's History of Ancient Philosophy, Vol. IV, pp. 625, 626.

country twenty-three hundred years ago, assures us that while they preserved old customs they never acquired new ones.¹ In another point of view, the similarity between these distant countries is equally interesting, since it evidently arises from the causes already noticed as common to both. In Mexico and Peru the lower classes being at the disposal of the upper, there followed that frivolous waste of labor which we have observed in Egypt, and evidence of which may also be seen in the remains of those temples and palaces that are still found in several parts of Asia. Both Mexicans and Peruvians erected immense buildings, which were as useless as those of Egypt, and which no country could produce, unless the labor of the people were ill paid and ill directed.² The cost of these monuments of vanity is unknown; but it must have been enormous, since the Americans, being ignorant of the use of iron,³ were unable to employ a resource by which, in the construction of large works, labor is greatly abridged. Some particulars, however, have been preserved, from which an idea may be formed on this subject. To take, for instance, the palaces of their kings, we find that in Peru the erection of the royal residence occupied, during fifty years, twenty thousand men;⁴ while that of Mexico cost the labor of no less than two hundred thousand, — striking facts, which, if all other testimonies had perished, would enable us to appreciate the

¹ Herodotus, Book II, chap. 79: πατρίοισι δὲ χρεώμενοι νόμοισι, ἄλλον οὐδένα ἐπικτείνωται: and see the note in Baehr, Vol. I, p. 660: "νόμους priores interpretes explicarunt *cantilenas*, *hymnos*; Schweighæuserus rectius intellexit *instituta ac mores*." In the same way, in Timæus, Plato represents an Egyptian priest saying to Solon, "Ἕλληνες δὲ παῖδες ἐστέ, γέρων δὲ Ἕλλην οὐκ ἔστιν. And when Solon asked what he meant, Νέοι ἐστέ, was the reply, τὰς ψυχὰς πάντες· οὐδεμίαν γὰρ ἐν αὐταῖς ἔχετε δι' ἀρχαίαν ἀκοήν παλαιὰν δόξαν οὐδὲ μάθημα χρόνῳ πολλῶν οὐδέεν. Platonis Opera, Vol. VII, chap. v. p. 242, edit. Bekker, London, 1826.

² The Mexicans appear to have been even more wantonly prodigal than the Peruvians. See, respecting their immense pyramids, one of which, Cholula, had a base "twice as broad as the largest Egyptian pyramid," M'Culloh's Researches, pp. 252, 256; Bullock's Mexico, pp. 111-115, 414; Humboldt, Nouvelle Espagne, Vol. I, pp. 240, 241.

³ Prescott's History of Mexico, Vol. I, p. 117; Vol. III, p. 341; and Prescott's History of Peru, Vol. I, p. 145. See also Haüy, Traité de Minéralogie, Paris, 1801, Vol. IV, p. 372.

⁴ Prescott's History of Peru, Vol. I, p. 18.

condition of countries in which, for such insignificant purposes, such vast power was expended.¹

The preceding evidence, collected from sources of unquestioned credibility, proves the force of those great physical laws, which, in the most flourishing countries out of Europe, encouraged the accumulation of wealth, but prevented its dispersion, and thus secured to the upper classes a monopoly of one of the most important elements of social and political power. The result was, that in all those civilizations the great body of the people derived no benefit from the national improvements; hence, the basis of the progress being very narrow, the progress itself was very insecure.² When, therefore, unfavorable circumstances arose from without, it was but natural that the whole system should fall to the ground. In such countries society, being divided against itself, was unable to stand. And there can be no doubt that long before the crises of their actual destruction, these one-sided and irregular civilizations had begun to decay, so that their own degeneracy aided the progress of foreign invaders and secured the overthrow of those ancient kingdoms, which, under a sounder system, might have been easily saved.

Thus far as to the way in which the great civilizations exterior to Europe have been affected by the peculiarities of their food,

¹ Mr. Prescott (*History of Mexico*, Vol. I, p. 153) says: "We are not informed of the time occupied in building this palace, but two hundred thousand workmen, it is said, were employed on it. However this may be, it is certain that the Tezcucan monarchs, like those of Asia and ancient Egypt, had the control of immense masses of men, and would sometimes turn the whole population of a conquered city, including the women, into the public works. The most gigantic monuments of architecture which the world has witnessed would never have been reared by the hands of freemen." The Mexican historian, Ixtlilxochitl, gives a curious account of one of the royal palaces. See his *Histoire des Chichimèques*, translated by Ternaux-Compans, Paris, 1840, Vol. I, chap. xxxvii, pp. 257-262.

² This may be illustrated by a good remark of M. Matter, to the effect that when the Egyptians had once lost their race of kings, it was found impossible for the nation to reconstruct itself (Matter, *Histoire de l'École d'Alexandrie*, Vol. I, p. 68; a striking passage). In Persia, again, when the feeling of loyalty decayed, so also did the feeling of national power (Malcolm's *History of Persia*, Vol. II, p. 130). The history of the most civilized parts of Europe presents a picture exactly the reverse of this.

climate, and soil. It now remains for me to examine the effect of those other physical agents to which I have given the collective name of Aspects of Nature, and which will be found suggestive of some very wide and comprehensive inquiries into the influence exercised by the external world in predisposing men to certain habits of thought, and thus giving a particular tone to religion, arts, literature, and, in a word, to all the principal manifestations of the human mind. To ascertain how this is brought about forms a necessary supplement to the investigations just concluded. For, as we have seen that climate, food, and soil mainly concern the accumulation and distribution of wealth, so also shall we see that the Aspects of Nature concern the accumulation and distribution of thought. In the first case, we have to do with the material interests of man; in the other case, with his intellectual interests. The former I have analyzed as far as I am able, and perhaps as far as the existing state of knowledge will allow.¹ But the other, namely, the relation between the Aspects of Nature and the mind of Man, involves speculations of such magnitude, and requires such a mass of materials drawn from every quarter, that I feel very apprehensive as to the result; and I need hardly say that I make no pretensions to anything approaching an exhaustive analysis, nor can I hope to do more than generalize a few of the laws of that complicated but as yet unexplored process by which the external world has affected the human mind, has warped its natural movements, and too often checked its natural progress.

The Aspects of Nature, when considered from this point of view, are divisible into two classes: the first class being those which are most likely to excite the imagination; and the other class being those which address themselves to the understanding commonly so called, that is, to the mere logical operations of the intellect. For although it is true that, in a complete and well-balanced mind, the imagination and the understanding each play their respective parts, and are auxiliary to each other, it is also

¹ I mean, in regard to the physical and economical generalizations. As to the literature of the subject, I am conscious of many deficiencies, particularly in respect to the Mexican and Peruvian histories.

true that, in a majority of instances, the understanding is too weak to curb the imagination and restrain its dangerous license. The tendency of advancing civilization is to remedy this disproportion, and invest the reasoning powers with that authority which, in an early stage of society, the imagination exclusively possesses. Whether or not there is ground for fearing that the reaction will eventually proceed too far, and that the reasoning faculties will in their turn tyrannize over the imaginative ones, is a question of the deepest interest; but in the present condition of our knowledge it is probably an insoluble one. At all events, it is certain that nothing like such a state has yet been seen; since even in this age, when the imagination is more under control than in any preceding one, it has far too much power, as might be easily proved not only from the superstitions which in every country still prevail among the vulgar, but also from that poetic reverence for antiquity which, though it has been long diminishing, still hampers the independence, blinds the judgment, and circumscribes the originality of the educated classes.

Now, so far as natural phenomena are concerned, it is evident that whatever inspires feelings of terror, or of great wonder, and whatever excites in the mind an idea of the vague and uncontrollable, has a special tendency to inflame the imagination and bring under its dominion the slower and more deliberate operations of the understanding. In such cases, man, contrasting himself with the force and majesty of nature, becomes painfully conscious of his own insignificance. A sense of inferiority steals over him. From every quarter innumerable obstacles hem him in and limit his individual will. His mind, appalled by the undefined and indefinable, hardly cares to scrutinize the details of which such imposing grandeur consists.¹ On the other hand, where the works

¹ The sensation of fear, even when there is no danger, becomes strong enough to destroy the pleasure that would otherwise be felt. See, for instance, a description of the great mountain boundary of Hindustan, in *Asiatic Researches*, Vol. XI, p. 469: "It is necessary for a person to place himself in our situation before he can form a just conception of the scene. The depth of the valley below, the progressive elevation of the intermediate hills, and the majestic splendor of the cloud-capt Himalaya, formed so grand a picture that the mind was impressed with a sensation of dread rather than of pleasure." Compare Vol. XIV, p. 116,

of nature are small and feeble, man regains confidence: he seems more able to rely on his own power; he can, as it were, pass through, and exercise authority in every direction. And as the phenomena are more accessible, it becomes easier for him to experiment on them, or to observe them with minuteness; an inquisitive and analytic spirit is encouraged, and he is tempted to generalize the appearances of nature, and refer them to the laws by which they are governed.

Looking in this way at the human mind as affected by the Aspects of Nature, it is surely a remarkable fact that all the great early civilizations were situated within and immediately adjoining the tropics, where those aspects are most sublime, most terrible, and where nature is, in every respect, most dangerous to man. Indeed, generally, in Asia, Africa, and America the external world is more formidable than in Europe. This holds good not only of the fixed and permanent phenomena, such as mountains and other great natural barriers, but also of occasional phenomena, such as earthquakes, tempests, hurricanes, pestilences, — all of which are in those regions very frequent and very disastrous. These constant and serious dangers produce effects analogous to those caused by the sublimity of nature, in so far that in both cases there is a tendency to increase the activity of the imagination. For the peculiar province of the imagination being to deal with the unknown, every event which is unexplained as well as important is a direct stimulus to our imaginative faculties. In the tropics events of this kind are more numerous than elsewhere; it therefore follows that in the tropics the imagination is most likely to triumph. A few illustrations of the working of this principle will place it in a clearer light, and will prepare the reader for the arguments based upon it.

Of those physical events which increase the insecurity of man, earthquakes are certainly among the most striking, in regard to the loss of life which they cause, as also in regard to their sudden and unexpected occurrence. There is reason to believe that they

Calcutta, 1822. In the Tyrol it has been observed that the grandeur of the mountain scenery imbues the minds of the natives with fear, and has caused the invention of many superstitious legends (*Alison's Europe*, Vol. IX, pp. 79, 80).

are always preceded by atmospheric changes which strike immediately at the nervous system, and thus have a direct physical tendency to impair the intellectual powers.¹ However this may be, there can be no doubt as to the effect they produce in encouraging particular associations and habits of thought. The terror which they inspire excites the imagination even to a painful extent, and, overbalancing the judgment, predisposes men to superstitious fancies. And what is highly curious is that repetition, so far from blunting such feelings, strengthens them. In Peru, where earthquakes appear to be more common than in any other country,² every succeeding visitation increases the general dismay, so that, in some cases, the fear becomes almost insupportable.³ The mind is thus constantly thrown into a timid and

¹ "Une augmentation d'électricité s'y manifeste aussi presque toujours, et ils sont généralement annoncés par le mugissement des bestiaux, par l'inquiétude des animaux domestiques, et dans les hommes par cette sorte de malaise qui, en Europe, précède les orages dans les personnes nerveuses" (Cuvier, *Progrès des Sciences*, Vol. I, p. 265). See also on this "Vorgefühl," the observation of Von Hoff, in Mr. Mallet's valuable essay on earthquakes (*British Association for 1850*, p. 68); and the "foreboding" in Tschudi's Peru, p. 165; and a letter in Nichols' *Illustrations of the Eighteenth Century*, Vol. IV, p. 504. The probable connection between earthquakes and electricity is noticed in Bakewell's *Geology*, p. 434.

² "Peru is more subject, perhaps, than any other country to the tremendous visitation of earthquakes" (M'Culloch's *Geographical Dictionary*, 1849, Vol. II, p. 499). Dr. Tschudi (*Travels in Peru*, p. 162) says of Lima, "At an average forty-five shocks may be counted on in the year." See also on the Peruvian earthquakes, pp. 43, 75, 87, 90.

³ A curious instance of association of ideas conquering the deadening effect of habit. Dr. Tschudi (Peru, p. 170), describing the panic, says, "No familiarity with the phenomenon can blunt this feeling." Beale (*South Sea Whaling Voyage*, p. 205, London, 1839) writes, "It is said at Peru that the oftener the natives of the place feel those vibrations of the earth, instead of becoming habituated to them, as persons do who are constantly exposed to other dangers, they become more filled with dismay every time the shock is repeated, so that aged people often find the terror a slight shock will produce almost insupportable." Compare Darwin's *Journal*, pp. 422, 423. So, too, in regard to Mexican earthquakes, Mr. Ward observes that "the natives are both more sensible than strangers of the smaller shocks, and more alarmed by them" (Ward's *Mexico*, Vol. II, p. 55). On the physiological effects of the fear caused by earthquakes, see the remarkable statement by Osiander in Burdach, *Physiologie comme Science d'Observation*, Vol. II, pp. 223, 224. That the fear should be not deadened by familiarity, but increased by it, would hardly be expected by speculative reasoners unacquainted with the evidence; and we find, in fact, that the Pyrrhonists asserted that *οἱ γούνοι σεισμοὶ παρ' οἷς συνεχῶς ἀποτελοῦνται οὐ θαυμάζονται· οὐδ' ὁ ἥλιος, ὅτι καθ' ἡμέραν ὀφθαί* (Diog. Laert. de Vitis Philos., Lib. IX, segm. 87, Vol. I, p. 591).

anxious state; and men witnessing the most serious dangers, which they can neither avoid nor understand, become impressed with a conviction of their own inability and of the poverty of their own resources.¹ In exactly the same proportion the imagination is aroused, and a belief in supernatural interference actively encouraged. Human power failing, superhuman power is called in; the mysterious and the invisible are believed to be present; and there grow up among the people those feelings of awe and of helplessness on which all superstition is based, and without which no superstition can exist.²

Further illustration of this may be found even in Europe, where such phenomena are, comparatively speaking, extremely rare. Earthquakes and volcanic eruptions are more frequent and more destructive in Italy and in the Spanish and Portuguese peninsula than in any other of the great countries; and it is precisely there that superstition is most rife, and the superstitious classes most powerful. Those were the countries where the clergy first established their authority, where the worst corruptions of Christianity took place, and where superstition has during the longest period retained the firmest hold. To this may be added another circumstance, indicative of the connection between these physical phenomena and the predominance of the imagination. Speaking generally, the fine arts are addressed more to the imagination, the sciences to the intellect.³ Now it is remarkable

¹ Mr. Stephens, who gives a striking description of an earthquake in Central America, emphatically says, "I never felt myself so feeble a thing before" (Stephen's Central America, Vol. I, p. 383). See also the account of the effects produced on the mind by an earthquake, in *Transactions of Society of Bombay*, Vol. III, p. 98, and the note at p. 105.

² The effect of earthquakes in encouraging superstition is noticed in Lyell's admirable work, *Principles of Geology*, p. 492. Compare a myth on the origin of earthquakes in Beausobre, *Histoire Critique de Manichée*, Vol. I, p. 243.

³ The greatest men in science, and in fact all very great men, have no doubt been remarkable for the powers of their imagination. But in art the imagination plays a far more conspicuous part than in science; and this is what I mean to express by the proposition in the text. Sir David Brewster, indeed, thinks that Newton was deficient in imagination: "the weakness of his imaginative powers" (Brewster's *Life of Newton*, 1855, Vol. II, p. 133). It is impossible to discuss so large a question in a note; but to my apprehension no poet, except Dante and Shakespeare, ever had an imagination more soaring and more audacious than that possessed by Sir Isaac Newton.

that all the greatest painters, and nearly all the greatest sculptors, modern Europe has possessed have been produced by the Italian and Spanish peninsulas. In regard to science, Italy has no doubt had several men of conspicuous ability; but their numbers are out of all proportion small compared with her artists and poets. As to Spain and Portugal, the literature of those two countries is eminently poetic, and from their schools have proceeded some of the greatest painters the world has ever seen. On the other hand, the purely reasoning faculties have been neglected, and the whole peninsula, from the earliest period to the present time, does not supply to the history of the natural sciences a single name of the highest merit; not one man whose works form an epoch in the progress of European knowledge.¹

The manner in which the Aspects of Nature, when they are very threatening, stimulate the imagination,² and by encouraging superstition discourage knowledge, may be made still more apparent by one or two additional facts. Among an ignorant people there is a direct tendency to ascribe all serious dangers to supernatural intervention; and a strong religious sentiment being thus aroused,³ it constantly happens not only that the danger is submitted to, but that it is actually worshiped. This is the case with some of the Hindus in the forests of Malabar;⁴

¹ The remarks made by Mr. Ticknor on the absence of science in Spain might be extended even further than he has done. See Ticknor's *History of Spanish Literature*, Vol. III, pp. 222, 223. He says (p. 237), that in 1771 the University of Salamanca, being urged to teach the physical sciences, replied, "Newton teaches nothing that would make a good logician or metaphysician, and Gassendi and Descartes do not agree so well with revealed truth as Aristotle does."

² In *Asiatic Researches*, Vol. VI, pp. 35, 36, there is a good instance of an earthquake giving rise to a theological fiction. See also Vol. I, pp. 154-157; and compare Coleman's *Mythology of the Hindus*, p. 17.

³ See, for example, *Asiatic Researches*, Vol. IV, pp. 56-57; Vol. VII, p. 94; and the effect produced by a volcano, in *Journal of Geographical Society*, Vol. V, p. 388. See also Vol. XX, p. 8, and a partial recognition of the principle by Sextus Empiricus, in Tennemann, *Geschichte der Philosophie*, Vol. I, p. 292. Compare the use the clergy made of a volcanic eruption in Iceland (*Wheaton's History of the Northmen*, p. 42); and see further Raffles' *History of Java*, Vol. I, pp. 29, 274, and Tschudi's *Peru*, pp. 64, 167, 171.

⁴ The Hindus in the Iruari forests, says Mr. Edye, "worship and respect everything from which they apprehend danger" (Edye on the Coast of Malabar, in *Journal of Asiatic Society*, Vol. II, p. 337).

and many similar instances will occur to whoever has studied the condition of barbarous tribes.¹ Indeed, so far is this carried that in some countries the inhabitants, from feelings of reverential fear, refuse to destroy wild beasts and noxious reptiles; the mischief these animals inflict being the cause of the impunity they enjoy.²

It is in this way that the old tropical civilizations had to struggle with innumerable difficulties unknown to the temperate zone, where European civilization has long flourished. The devastations of animals hostile to man, the ravages of hurricanes, tempests, earthquakes,³ and similar perils constantly pressed upon them and affected the tone of their national character; for the mere loss of life was the smallest part of the inconvenience. The real mischief was, that there were engendered in the mind

¹ Dr. Prichard (*Physical History*, Vol. IV, p. 501) says, "The tiger is worshiped by the Hajin tribe in the vicinity of the Garrows or Garudus." Compare *Transactions of Asiatic Society*, Vol. III, p. 66. Among the Garrows themselves this feeling is so strong that "the tiger's nose strung round a woman's neck is considered as a great preservative in childbirth" (Coleman's *Mythology of the Hindus*, p. 321). The Seiks have a curious superstition respecting wounds inflicted by tigers (Burnes' *Bokhara*, 1834, Vol. III, p. 140); and the Malasir believe that these animals are sent as a punishment for irreligion (Buchanan's *Journey through the Mysore*, Vol. II, p. 385).

² The inhabitants of Sumatra are, for superstitious reasons, most unwilling to destroy tigers, though they commit frightful ravages (Marsden's *History of Sumatra*, pp. 149, 254). The Russian account of the Kamtschatkans says, "Besides the above-mentioned gods, they pay a religious regard to several animals from which they apprehend danger" (Grieve's *History of Kamtschatka*, p. 205). Bruce mentions that in Abyssinia hyenas are considered "enchanters"; and the inhabitants "will not touch the skin of a hyena till it has been prayed over and exorcised by a priest" (Murray's *Life of Bruce*, p. 472). Allied to this is the respect paid to bears (Erman's *Siberia*, Vol. I, p. 492; Vol. II, pp. 42, 43); also the extensively diffused worship of the serpent, whose wily movements are well calculated to inspire fear, and therefore rouse the religious feelings. The danger apprehended from noxious reptiles is connected with the Dews of the *Zendavesta*. See Matter's *Histoire du Gnosticisme*, Vol. I, p. 380, Paris, 1828.

³ To give one instance of the extent to which these operate, it may be mentioned that in 1815 an earthquake and volcanic eruption broke forth in Sumbawa, which shook the ground "through an area of one thousand miles in circumference," and the detonations of which were heard at a distance of nine hundred and seventy geographical miles. See Somerville's *Connection of the Physical Sciences*, p. 283; Hitchcock's *Religion of Geology*, p. 190; Low's *Sarawak*, p. 10; Bakewell's *Geology*, p. 438.

associations which made the imagination predominate over the understanding, which infused into the people a spirit of reverence instead of a spirit of inquiry, and which encouraged a disposition to neglect the investigation of natural causes and ascribe events to the operation of supernatural ones.

Everything we know of those countries proves how active this tendency must have been. With extremely few exceptions, health is more precarious and disease more common in tropical climates than in temperate ones. Now it has been often observed, and indeed is very obvious, that the fear of death makes men more prone to seek supernatural aid than they would otherwise be. So complete is our ignorance respecting another life that it is no wonder if even the stoutest heart should quail at the sudden approach of that dark and untried future. On this subject the reason is perfectly silent; the imagination, therefore, is uncontrolled. The operation of natural causes being brought to an end, supernatural causes are supposed to begin. Hence it is, that whatever increases in any country the amount of dangerous disease has an immediate tendency to strengthen superstition and aggrandize the imagination at the expense of the understanding. This principle is so universal that in every part of the world the vulgar ascribe to the intervention of the Deity those diseases which are peculiarly fatal, and especially those which have a sudden and mysterious appearance. In Europe it used to be believed that every pestilence was a manifestation of the divine anger;¹ and this opinion, though it has long been dying

¹ In the sixteenth century, "Les différentes sectes s'accordèrent néanmoins à regarder les maladies graves et dangereuses comme un effet immédiat de la puissance divine; idée que Fernel contribua encore à répandre davantage. On trouve dans Paré plusieurs passages de la Bible, cités pour prouver que la colère de Dieu est la seule cause de la peste, qu'elle suffit pour provoquer ce fléau, et que sans elle les causes éloignées ne sauraient agir" (Sprengel, *Histoire de la Médecine*, Vol. III, p. 112). The same learned writer says of the Middle Ages (Vol. II, p. 372), "D'après l'esprit généralement répandu dans ces siècles de barbarie, on croyait la lèpre envoyée d'une manière immédiate par Dieu." See also pp. 145, 346, 431. Bishop Heber says that the Hindus deprive lepers of caste and of the right of possessing property because they are objects of "Heaven's wrath" (Heber's *Journey through India*, Vol. II, p. 330). On the Jewish opinion, see Le Clerc, *Bibliothèque Universelle*, Vol. IV, p. 402, Amsterdam, 1702. And as to

away, is by no means extinct even in the most civilized countries.¹ Superstition of this kind will of course be strongest either where medical knowledge is most backward or where disease is most abundant. In countries where both these conditions are fulfilled

the early Christians, see Maury, *Légendes Pieuses*, p. 68, Paris, 1843; though M. Maury ascribes to "les idées orientales reçues par le christianisme" what is due to the operation of a much wider principle.

¹ Under the influence of the inductive philosophy the theological theory of disease was seriously weakened before the middle of the seventeenth century; and by the middle, or at all events the latter half, of the eighteenth century it had lost all its partisans among scientific men. At present it still lingers on among the vulgar; and traces of it may be found in the writings of the clergy, and in the works of other persons little acquainted with physical knowledge. When the cholera broke out in England attempts were made to revive the old notion; but the spirit of the age was too strong for such efforts to succeed; and it may be safely predicted that men will never return to their former opinions unless they first return to their former ignorance. As a specimen of the ideas which the cholera tended to excite, and of their antagonism to all scientific investigation, I may refer to a letter written in 1832 by Mrs. Grant, a woman of some accomplishments and not devoid of influence (*Correspondence of Mrs. Grant*, Vol. III, pp. 216, 217, London, 1844), where she states: "It appears to me great presumption to indulge so much as people do in speculation and conjecture about a disease so evidently a peculiar infliction, and different from all other modes of suffering hitherto known." This desire to limit human speculation is precisely the feeling which long retained Europe in darkness, since it effectually prevented those free inquiries to which we are indebted for all the real knowledge we possess. The doubts of Boyle upon this subject supply a curious instance of the transitionary state through which the mind was passing in the seventeenth century, and by which the way was prepared for the great liberating movement of the next age. Boyle, after stating both sides of the question, namely, the theological and the scientific, adds, "And it is the less likely that these sweeping and contagious maladies should be always sent for the punishment of impious men, because I remember to have read in good authors that as some plagues destroyed both men and beasts, so some others did peculiarly destroy brute animals of very little consideration or use to men, as cats, etc.

"Upon these and the like reasons I have sometimes suspected that in the controversy about the origin of the plague, namely whether it be natural or supernatural, neither of the contending parties is altogether in the right, since it is very possible that some pestilences may not break forth without an extraordinary, though perhaps not immediate, interposition of Almighty God, provoked by the sins of men; and yet other plagues may be produced by a tragical concurrence of merely natural causes" (*Discourse on the Air*, in Boyle's Works, Vol. IV, pp. 288, 289). "*Neither of the contending parties is altogether in the right*,"—an instructive passage towards understanding the compromising spirit of the seventeenth century; standing midway, as it did, between the credulity of the sixteenth, and the scepticism of the eighteenth.

the superstition is supreme; and even where only one of the conditions exists the tendency is so irresistible that, I believe, there are no barbarous people who do not ascribe to their good or evil deities not only extraordinary diseases but even many of the ordinary ones to which they are liable.¹

Here, then, we have another specimen of the unfavorable influence which, in the old civilizations, external phenomena

¹ To the historian of the human mind the whole question is so full of interest that I shall refer in this note to all the evidence I have been able to collect; and whoever will compare the following passages may satisfy himself that there is in every part of the world an intimate relation between ignorance respecting the nature and proper treatment of a disease, and the belief that such disease is caused by supernatural power, and is to be cured by it. Burton's *Sindh*, p. 146, London, 1851; Ellis' *Polynesian Researches*, Vol. I, p. 395; Vol. III, pp. 36, 41; Vol. IV, pp. 293, 334, 375; Cullen's *Works*, Vol. II, pp. 414, 434, Edinburgh, 1827; Esquirol, *Maladies Mentales*, Vol. I, pp. 274, 482; Cabanis, *Rapports du Physique et du Moral*, p. 277; Volney, *Voyage en Syrie*, Vol. I, p. 426; Turner's *Embassy to Tibet*, p. 104; Syme's *Embassy to Ava*, Vol. II, p. 211; Ellis' *Tour through Hawaii*, pp. 282, 283, 332, 333; Renouard, *Histoire de la Médecine*, Vol. I, p. 398; Broussais, *Examen des Doctrines Médicales*, Vol. I, pp. 261, 262; Grote's *History of Greece*, Vol. I, p. 485 (compare p. 251, and Vol. VI, p. 213); Grieve's *History of Kamtschatka*, p. 217; *Journal of Statistical Society*, Vol. X, p. 10; Buchanan's *North American Indians*, pp. 256, 257; Halkett's *North American Indians*, pp. 36, 37, 388, 393, 394; Catlin's *North American Indians*, Vol. I, pp. 35-41; Briggs' *On the Aboriginal Tribes of India*, in *Report of British Association for 1850*, p. 172; *Transactions of Society of Bombay*, Vol. II, p. 30; Percival's *Ceylon*, p. 201; Buchanan's *Journey through the Mysore*, Vol. II, pp. 27, 152, 286, 528; Vol. III, pp. 23, 188, 253 (so, too, M. Geoffrey Saint-Hilaire, *Anomalies de l'Organisation*, Vol. III, p. 380, says that when we were quite ignorant of the cause of monstrous births, the phenomenon was ascribed to the Deity, — "de là aussi l'intervention supposée de la divinité"; and for an exact verification of this, compare Burdach, *Traité de Physiologie*, Vol. II, p. 247, with *Journal of Geographical Society*, Vol. XVI, p. 113); Ellis' *History of Madagascar*, Vol. I, pp. 224, 225; Prichard's *Physical History*, Vol. I, p. 207; Vol. V, p. 492; *Journal of Asiatic Society*, Vol. III, p. 230; Vol. IV, p. 158; *Asiatic Researches*, Vol. III, pp. 29, 156; Vol. IV, pp. 56, 58, 74; Vol. XVI, pp. 215, 280; Neander's *History of the Church*, Vol. III, p. 119; Crawford's *History of the Indian Archipelago*, Vol. I, p. 328; Low's *Sarawak*, pp. 174, 261; Cook's *Voyages*, Vol. I, p. 229; Mariner's *Tonga Islands*, Vol. I, pp. 194, 350-360, 374, 438; Vol. II, pp. 172, 230; Huc's *Travels in Tartary and Thibet*, Vol. I, pp. 74-77; Richardson's *Travels in the Sahara*, Vol. I, p. 27; McCulloh's *Researches*, p. 105; *Journal of Geographical Society*, Vol. I, p. 41; Vol. IV, p. 260; Vol. XIV, p. 37. And in regard to Europe, compare Spence's *Origin of the Laws of Europe*, p. 322; Turner's *History of England*, Vol. III, p. 443; Phillips on *Scrofula*, p. 255; Otter's *Life of Clarke*, Vol. I, pp. 265, 266, which may be illustrated by the "sacred" disease of Cambyses, no doubt epilepsy (see Herodotus Lib. III, chap. xxxiv, Vol. II, p. 63).

exercised over the human mind. For those parts of Asia where the highest refinement was reached are, from various physical causes, much more unhealthy than the most civilized parts of Europe.¹ This fact alone must have produced a considerable effect on the national character,² and the more so as it was aided by those other circumstances which I have pointed out, all tending in the same direction. To this may be added, that the great plagues by which Europe has at different periods been scourged have for the most part proceeded from the East, which is their natural birthplace, and where they are most fatal. Indeed, of those cruel diseases now existing in Europe scarcely one is indigenous; and the worst of them were imported from tropical countries in and after the first century of the Christian era.³

Summing up these facts, it may be stated that in the civilizations exterior to Europe all nature conspired to increase the authority of the imaginative faculties and weaken the authority of the reasoning ones. With the materials now existing, it would be possible to follow this vast law to its remotest consequences, and show how in Europe it is opposed by another law diametrically opposite, and by virtue of which the tendency of natural phenomena is, on the whole, to limit the imagination and embolden the understanding, thus inspiring man with confidence in

¹ Heat, moisture, and consequent rapid decomposition of vegetable matter are certainly among the causes of this; and to them may perhaps be added the electrical state of the atmosphere in the tropics. Compare Holland's *Medical Notes*, p. 477; M'William's *Medical Expedition to the Niger*, pp. 157, 185; Simon's *Pathology*, p. 269; Forry's *Climate and its Endemic Influences*, p. 158. M. Lepelletier says, rather vaguely (*Physiologie Médicale*, Vol. IV, p. 527), that the temperate zones are "favorables à l'exercice complet et régulier des phénomènes vitaux."

² And must have strengthened the power of the clergy; for, as Charlevoix says with great frankness, "pestilences are the harvests of the ministers of God" (Southey's *History of Brazil*, Vol. II, p. 254).

³ For evidence of the extra-European origin of European diseases, some of which, such as the smallpox, have passed from epidemics into endemics, compare *Encyclopedia of the Medical Sciences*, 4to, 1847, p. 728; *Transactions of Asiatic Society*, Vol. II, pp. 54, 55; Michaelis on the *Laws of Moses*, Vol. III, p. 313; Sprengel, *Histoire de la Médecine*, Vol. II, pp. 33, 195; Wallace's *Dissertation on the Numbers of Mankind*, pp. 81, 82; Huetiana, Amsterdam, 1723, pp. 132-135; Sanders on the *Smallpox*, pp. 3-4, Edinburgh, 1813; Wilks' *History of the South of India*, Vol. III, pp. 16-21; Clot-Bey, *De la Peste*, p. 227, Paris, 1840.

his own resources, and facilitating the increase of his knowledge by encouraging that bold, inquisitive, and scientific spirit which is constantly advancing, and on which all future progress must depend.

It is not to be supposed that I can trace in detail the way in which, owing to these peculiarities, the civilization of Europe has diverged from all others that preceded it. To do this would require a learning and a reach of thought to which hardly any single man ought to pretend, since it is one thing to have a perception of a large and general truth, and it is another thing to follow out that truth in all its ramifications, and prove it by such evidence as will satisfy ordinary readers. Those, indeed, who are accustomed to speculations of this character, and are able to discern in the history of man something more than a mere relation of events, will at once understand that in these complicated subjects the wider any generalization is, the greater will be the chance of apparent exceptions; and that when the theory covers a very large space the exceptions may be innumerable and yet the theory remain perfectly accurate. The two fundamental propositions which I hope to have demonstrated are: first, that there are certain natural phenomena which act on the human mind by exciting the imagination; and second, that those phenomena are much more numerous out of Europe than in it. If these two propositions are admitted, it inevitably follows that in those countries where the imagination has received the stimulus some specific effects must have been produced, unless, indeed, the effects have been neutralized by other causes. Whether or not there have been antagonistic causes is immaterial to the truth of the theory, which is based on the two propositions just stated. In a scientific point of view, therefore, the generalization is complete; and it would perhaps be prudent to leave it as it now stands rather than attempt to confirm it by further illustrations, since all particular facts are liable to be erroneously stated, and are sure to be contradicted by those who dislike the conclusions they corroborate. But in order to familiarize the reader with the principles I have put forward, it does seem advisable that a few instances should be given of their actual working; and I will therefore briefly notice the effects they have produced

in the three great divisions of Literature, Religion, and Art. In each of these departments I will endeavor to indicate how the leading features have been affected by the Aspects of Nature; and with a view of simplifying the inquiry, I will take the two most conspicuous instances on each side, and compare the manifestations of the intellect of Greece with those of the intellect of India, — these being the two countries respecting which the materials are most ample, and in which the physical contrasts are most striking.

If, then, we look at the ancient literature of India, even during its best period, we shall find the most remarkable evidence of the uncontrolled ascendancy of the imagination. In the first place, we have the striking fact that scarcely any attention has been paid to prose composition, all the best writers having devoted themselves to poetry, as being most congenial to the national habits of thought. Their works on grammar, on law, on history, on medicine, on mathematics, on geography, and on metaphysics are nearly all poems, and are put together according to a regular system of versification.¹ The consequence is, that while prose

¹ "So verwandelt das geistige Leben des Hindu sich in wahre Poesie, und das bezeichnende Merkmal seiner ganzen Bildung ist: Herrschaft der Einbildungskraft über den Verstand; im geraden Gegensatz mit der Bildung des Europäers, deren allgemeiner Charakter in der Herrschaft des Verstandes über die Einbildungskraft besteht. Es wird dadurch begreiflich, dass die Literatur der Hindus nur eine poetische ist; dass sie überreich an Dichterwerken, aber arm am wissenschaftlichen Schriften sind; dass ihre heiligen Schriften, ihre Gesetze und Sagen poetisch, und grösstentheils in Versen geschrieben sind; ja dass Lehrbücher der Grammatik, der Heilkunde, der Mathematik und Erdbeschreibung in Versen verfasst sind" (Rhode, Religiöse Bildung der Hindus, Vol. II, p. 626). Thus, too, we are told, respecting one of their most celebrated metaphysical systems, that "the best text of the Sanchya is a short treatise in verse" (Colebrooke on the Philosophy of the Hindus, in *Transactions of Asiatic Society*, Vol. I, p. 23). And in another place the same high authority says (*Asiatic Researches*, Vol. X, p. 439), "The metrical treatises on law and other sciences are almost entirely composed in this easy verse." M. Klaproth, in an analysis of a Sanskrit history of Cashmere, says, "Comme presque toutes les compositions hindoues, il est écrit en vers" (*Journal Asiatique*, I. série, Vol. VII, p. 8, Paris, 1825). See also, in Vol. VI, pp. 175, 176, the remarks of M. Burnouf, "Les philosophes indiens, comme s'ils ne pouvaient échapper aux influences poétiques de leur climat, traitent les questions de la métaphysique le plus abstraite par similitudes et métaphores." Compare Vol. VI, p. 4, "le génie indien si poétique et si religieux"; and see Cousin, *Histoire de la Philosophie*, II. série, Vol. I, p. 27.

writing is utterly despised, the art of poetry has been cultivated so assiduously that the Sanskrit can boast of meters more numerous and more complicated than have ever been possessed by any of the European languages.¹

This peculiarity in the form of Indian literature is accompanied by a corresponding peculiarity in its spirit. For it is no exaggeration to say, that in that literature everything is calculated to set the reason of man at open defiance. An imagination, luxuriant even to disease, runs riot on every occasion. This is particularly seen in those productions which are most eminently national, such as the Ramayana, the Mahabharata, and the Puranas in general. But we also find it even in their geographical and chronological systems, which of all others might be supposed least liable to imaginative flights. A few examples of the statements put forward in the most authoritative books will supply the means of instituting a comparison with the totally opposite condition of the European intellect, and will give the reader some idea of the extent to which credulity can proceed, even among a civilized people.²

Of all the various ways in which the imagination has distorted truth, there is none that has worked so much harm as an exaggerated respect for past ages. This reverence for antiquity is repugnant to every maxim of reason, and is merely the indulgence of a poetic sentiment in favor of the remote and unknown. It is therefore natural that, in periods when the intellect was, comparatively speaking, inert, this sentiment should have been far

¹ Mr. Yates says of the Hindus, that no other people have ever "presented an equal variety of poetic compositions. The various meters of Greece and Rome have filled Europe with astonishment; but what are these, compared with the extensive range of Sanskrit meters under its three classes of poetical writing?" (Yates on Sanskrit Alliteration, in Asiatic Researches, Vol. XX, p. 159, Calcutta, 1836). See also on the Sanskrit meters, p. 321, and an Essay by Colebrooke, Vol. X, pp. 389-474. On the metrical system of the Vedas, see Mr. Wilson's note in the Rig Veda Sanhita, Vol. II, p. 135.

² In Europe, as we shall see in the sixth chapter of this volume, the credulity was at one time extraordinary; but the age was then barbarous, and barbarism is always credulous. On the other hand, the examples gathered from Indian literature will be taken from the works of a lettered people, written in a language extremely rich, and so highly polished that some competent judges have declared it equal, if not superior, to the Greek.

stronger than it now is ; and there can be little doubt that it will continue to grow weaker, and that in the same proportion the feeling of progress will gain ground, so that veneration for the past will be succeeded by hope for the future. But formerly the veneration was supreme, and innumerable traces of it may be found in the literature and popular creed of every country. It is this, for instance, which inspired the poets with their notion of a golden age, in which the world was filled with peace, in which evil passions were stilled, and crimes were unknown. It is this, again, which gave to theologians their idea of the primitive virtue and simplicity of man, and of his subsequent fall from that high estate. And it is this same principle which diffused a belief that in the olden times men were not only more virtuous and happy but also physically superior in the structure of their bodies ; and that by this means they attained to a larger stature and lived to a greater age than is possible for us, their feeble and degenerate descendants.

Opinions of this kind being adopted by the imagination in spite of the understanding, it follows that the strength of such opinions becomes, in any country, one of the standards by which we may estimate the predominance of the imaginative faculties. Applying this test to the literature of India, we shall find a striking confirmation of the conclusions already drawn. The marvelous feats of antiquity with which the Sanskrit books abound are so long and so complicated that it would occupy too much space to give even an outline of them, but there is one class of these singular fictions which is well worth attention and admits of being briefly stated. I allude to the extraordinary age which man was supposed to have attained in former times. A belief in the longevity of the human race at an early period of the world was the natural product of those feelings which ascribed to the ancients an universal superiority over the moderns ; and this we see exemplified in some of the Christian, and in many of the Hebrew, writings. But the statements in these works are tame and insignificant when compared with what is preserved in the literature of India. On this, as on every subject, the imagination of the Hindus distanced all competition. Thus, among an

immense number of similar facts we find it recorded that in ancient times the duration of the life of common men was eighty thousand years,¹ and that holy men lived to be upwards of one hundred thousand.² Some died a little sooner, others a little later; but in the most flourishing period of antiquity, if we take all classes together, one hundred thousand years was the average.³ Of one king, whose name was Yudhishtir, it is casually mentioned that he reigned twenty-seven thousand years;⁴ while another, called Alarka, reigned sixty-six thousand.⁵ They were cut off in their prime, since there are several instances of the early poets living to be about half a million.⁶ But the most remarkable case is that of a very shining character in Indian history, who united in his single person the functions of a king and a saint. This eminent man lived in a pure and virtuous age, and his days were indeed long in the land, since when he was made king he was two million years old; he then reigned six million three hundred thousand years; having done which, he resigned his empire, and lingered on for one hundred thousand years more.⁷

¹ "The limit of life was 80,000 years" (Asiatic Researches, Vol. XVI, p. 456, Calcutta, 1828). This was likewise the estimate of the Tibetan divines, according to whom men formerly "parvenaient à l'âge de 80,000 ans" (*Journal Asiatique*, I. série, Vol. III, p. 199, Paris, 1823).

² "Den Hindu macht dieser Widerspruch nicht verlegen, da er seine Heiligen 100,000 Jahre und länger leben lässt" (Rhode, Religiöse Bildung der Hindus, Vol. I, p. 175).

³ In the Dabistan, Vol. II, p. 47, it is stated of the earliest inhabitants of the world that "the duration of human life in this age extended to one hundred thousand common years."

⁴ Wilford (Asiatic Researches, Vol. V, p. 242) says, "When the Puranas speak of the kings of ancient times, they are equally extravagant. According to them, King Yudhishtir reigned seven-and-twenty thousand years."

⁵ "For sixty thousand and sixty hundred years no other youthful monarch except Alarka reigned over the earth" (Vishnu Purana, p. 408).

⁶ And sometimes more. In the Essay on Indian Chronology in Works of Sir W. Jones, Vol. I, p. 325, we hear of "a conversation between Valmic and Vyasa, . . . two bards whose ages were separated by a period of 864,000 years." This passage is also in Asiatic Researches, Vol. II, p. 399.

⁷ "He was the first king, first anchorite, and first saint, and is therefore entitled Prathama-Raja, Prathama Bhicshacara, Prathama Jina, and Prathama Tirthancara. At the time of his inauguration as king his age was two million years. He reigned six million three hundred thousand years, and then resigned his empire to his sons: and having employed one hundred thousand years in passing through the several

The same boundless reverence for antiquity made the Hindus refer everything important to the most distant periods, and they frequently assign a date which is absolutely bewildering.¹ Their great collection of laws, called the Institutes of Manu, is certainly less than three thousand years old ; but the Indian chronologists, so far from being satisfied with this, ascribe to them an age that the sober European mind finds a difficulty even in conceiving. According to the best native authorities, these Institutes were revealed to man about two thousand million years before the present era.²

All this is but a part of that love of the remote, that straining after the infinite, and that indifference to the present, which characterizes every branch of the Indian intellect. Not only in literature, but also in religion and in art, this tendency is supreme. To subjugate the understanding and exalt the imagination is the universal principle. In the dogmas of their theology, in the character of their gods, and even in the forms of their temples we see how the sublime and threatening aspects of the external world have filled the mind of the people with those images of the grand and the terrible which they strive to reproduce in a visible form and to which they owe the leading peculiarities of their national culture.

Our view of this vast process may be made clearer by comparing it with the opposite condition of Greece. In Greece we see a country altogether the reverse of India. The works of nature, which in India are of startling magnitude, are in Greece far smaller, feebler, and in every way less threatening to man. In the great center of Asiatic civilization the energies of the human race are confined and, as it were, intimidated by the surrounding phenomena. Besides the dangers incidental to tropical climates, there

stages of austerity and sanctity, departed from this world on the summit of a mountain named Ashtapada" (*Asiatic Researches*, Vol. IX, p. 305).

¹ "Speculationen über Zahlen sind dem Inder so geläufig, dass selbst die Sprache einen Ausdruck hat für eine Unität mit 63 Nullen, nämlich Asanke, eben weil die Berechnung der Weltperioden diese enorme Grössen nothwendig machte, denn jene einfachen 12,000 Jahre schienen einem Volke, welches so gerne die höchstmögliche Potenz auf seine Gottheit übertragen mögte, viel zu geringe zu seyn" (Bohlen, *Das alte Indien*, Vol. II, p. 298).

² Elphinstone's *History of India*, p. 136, "a period exceeding 4,320,000 multiplied by six times seventy-one."

are those noble mountains which seem to touch the sky, and from whose sides are discharged mighty rivers which no art can divert from their course and which no bridge has ever been able to span. There, too, are impassable forests, whole countries lined with interminable jungle, and beyond them, again, dreary and boundless deserts,—all teaching man his own feebleness and his inability to cope with natural forces. Without, and on either side, there are great seas, ravaged by tempests far more destructive than any known in Europe, and of such sudden violence that it is impossible to guard against their effects. And as if in those regions everything combined to cramp the activity of man, the whole line of coast, from the mouth of the Ganges to the extreme south of the peninsula, does not contain a single safe and capacious harbor, not one port that affords a refuge, which is perhaps more necessary there than in any other part of the world.¹

But in Greece the Aspects of Nature are so entirely different that the very conditions of existence are changed. Greece, like India, forms a peninsula; but while in the Asiatic country everything is great and terrible, in the European country everything is small and feeble. The whole of Greece occupies a space somewhat less than the kingdom of Portugal,² that is, about a fortieth part of what is now called Hindustan.³ Situated in the most accessible part of a narrow sea, it had easy contact on the east with Asia Minor, on the west with Italy, on the south with Egypt. Dangers of all kinds were far less numerous than in the tropical

¹ Symes (*Embassy to Ava*, Vol. III, p. 278) says, "From the mouth of the Ganges to Cape Comorin, the whole range of our continental territory, there is not a single harbor capable of affording shelter to a vessel of 500 tons burden." Indeed, according to Percival, there is, with the exception of Bombay, no harbor, "either on the Coromandel or Malabar coasts, in which ships can moor in safety at all seasons of the year" (*Percival's Account of Ceylon*, pp. 2, 15, 66).

² "Altogether its area is somewhat less than that of Portugal." See Grote's *History of Greece*, Vol. II, p. 302; and the same remark in Thirlwall's *History of Greece*, Vol. I, p. 2, and in Heeren's *Ancient Greece*, 1845, p. 16. M. Heeren says, "But even if we add all the islands, its square contents are a third less than those of Portugal."

³ The area of Hindustan being, according to Mr. McCulloch (*Geographical Dictionary*, 1849, Vol. I, p. 993), "between one million two hundred thousand and one million three hundred thousand square miles."

civilizations. The climate was more healthy ;¹ earthquakes were less frequent ; hurricanes were less disastrous ; wild beasts and noxious animals, less abundant. In regard to the other great features the same law prevails. The highest mountains in Greece are less than one third of the Himalaya, so that nowhere do they reach the limit of perpetual snow.² As to rivers, not only is there nothing approaching those imposing volumes which are poured down from the mountains of Asia, but nature is so singularly sluggish that neither in northern nor in southern Greece do we find anything beyond a few streams which are easily forded, and which, indeed, in the summer season, are frequently dried up.³

These striking differences in the material phenomena of the two countries gave rise to corresponding differences in their mental associations. For as all ideas must arise partly from what are called spontaneous operations in the mind, and partly from what is suggested to the mind by the external world, it was natural that so great an alteration in one of the causes should produce an alteration in the effects. The tendency of the surrounding phenomena was, in India, to inspire fear ; in Greece, to give confidence. In India man was intimidated ; in Greece he was encouraged. In India obstacles of every sort were so numerous, so alarming, and apparently so inexplicable that the difficulties of life could only be solved by constantly appealing to

¹ In the best days of Greece those alarming epidemics by which the country was subsequently ravaged were comparatively little known. See Thirlwall's History of Greece, Vol. III, p. 134 ; Vol. VIII, p. 471. This may be owing to large cosmical causes, or to the simple fact that the different forms of pestilence had not yet been imported from the East by actual contact. On the vague accounts we possess of the earlier plagues, see Clot-Bey, *De la Peste*, pp. 21, 46, 184, Paris, 1840. The relation even of Thucydides is more satisfactory to scholars than to pathologists.

² "Mount Guiona, the highest point in Greece, and near its northern boundary, is 8239 feet high. . . . No mountain in Greece reaches the limit of perpetual snow" (M'Culloch's Geographical Dictionary, 1849, Vol. I, p. 924). Compare the table of mountains in Baker's Memoir on North Greece, in *Journal of Geographical Society*, Vol. VII, p. 94, with Bakewell's Geology, pp. 621, 622.

³ "Greece has no navigable river" (M'Culloch's Geographical Dictionary, Vol. I, p. 924). "Most of the rivers of Greece are torrents in early spring, and dry before the end of the summer" (Grote's History of Greece, Vol. II, p. 286).

the direct agency of supernatural causes. Those causes being beyond the province of the understanding, the resources of the imagination were incessantly occupied in studying them; the imagination itself was overworked, its activity became dangerous, it encroached on the understanding, and the equilibrium of the whole was destroyed. In Greece opposite circumstances were followed by opposite results. In Greece nature was less dangerous, less intrusive, and less mysterious than in India. In Greece, therefore, the human mind was less appalled, and less superstitious; natural causes began to be studied; physical science first became possible; and man, gradually waking to a sense of his own power, sought to investigate events with a boldness not to be expected in those other countries where the pressure of nature troubled his independence and suggested ideas with which knowledge is incompatible.

The effect of these habits of thought on the national religion must be very obvious to whoever has compared the popular creed of India with that of Greece. The mythology of India, like that of every tropical country, is based upon terror, and upon terror, too, of the most extravagant kind. Evidence of the universality of this feeling abounds in the sacred books of the Hindus, in their traditions, and even in the very form and appearance of their gods. And so deeply is all this impressed on the mind that the most popular deities are invariably those with whom images of fear are most intimately associated. Thus, for example, the worship of Siva is more general than any other; and as to its antiquity, there is reason to believe that it was borrowed by the Brahmins from the original Indians.¹ At all events, it is very

¹ See Stevenson on the Ante-Brahmanical Religion of the Hindus, in *Journal of Asiatic Society*, Vol. VIII, pp. 331, 332, 336, 338. Mr. Wilson (*Journal*, Vol. III, p. 204) says, "The prevailing form of the Hindu religion in the south of the peninsula was, at the commencement of the Christian era, and some time before it most probably, that of Siva." See also Vol. V, p. 85, where it is stated that Siva "is the only Hindu god to whom honor is done at Ellora." Compare *Transactions of Society of Bombay*, Vol. III, p. 521; Heeren's *Asiatic Nations*, 1846, Vol. II, pp. 62, 66. On the philosophical relation between the followers of Siva and those of Vishnu, see Ritter's *History of Ancient Philosophy*, Vol. IV, pp. 334, 335; and the noticeable fact (Buchanan's *Mysore*, Vol. II, p. 410), that even the Naimar caste, whose "proper deity" is Vishnu, "wear on their foreheads

ancient and very popular ; and Siva himself forms, with Brahma and Vishnu, the celebrated Hindu Triad. We need not, therefore, be surprised that with this god are connected images of terror, such as nothing but a tropical imagination could conceive. Siva is represented to the Indian mind as a hideous being, encircled by a girdle of snakes, with a human skull in his hand, and wearing a necklace composed of human bones. He has three eyes ; the ferocity of his temper is marked by his being clothed in a tiger's skin ; he is represented as wandering about like a madman, and over his left shoulder the deadly cobra de capello rears its head. This monstrous creation of an awe-struck fancy has a wife Doorga, called sometimes Kali and sometimes by other names.¹ She has a body of dark blue ; while the palms of her hands are red, to indicate her insatiate appetite for blood. She has four arms, with one of which she carries the skull of a giant ; her tongue protrudes, and hangs lolling from her mouth ; round her waist are the hands of her victims ; and her neck is adorned with human heads strung together in a ghastly row.²

If we now turn to Greece we find, even in the infancy of its religion, not the faintest trace of anything approaching to this. For in Greece, the causes of fear being less abundant, the expression of terror was less common. The Greeks, therefore, were by no means disposed to incorporate into their religion those feelings of dread natural to the Hindus. The tendency of Asiatic civilization was to widen the distance between men and their deities ; the tendency of Greek civilization was to diminish it. Thus it is that in Hindustan all the gods had something

the mark of Siva." As to the worship of Siva in the time of Alexander the Great, see Thirlwall's *History of Greece*, Vol. II, p. 36 ; and for further evidence of its extent, Bohlen, *Das alte Indien*, Vol. I, pp. 29, 147, 206, and *Transactions of Asiatic Society*, Vol. II, pp. 50, 294.

¹ So it is generally stated by the Hindu theologians ; but according to Rammohun Roy, Siva had two wives. See Rammohun Roy on the Veds, p. 90.

² On these attributes and representations of Siva and Doorga, see Rhode, *Religiöse Bildung der Hindus*, Vol. II, p. 241 ; Coleman's *Mythology of the Hindus*, pp. 63, 92 ; Bohlen, *Das alte Indien*, Vol. I, p. 207 ; Ward's *Religion of the Hindoos*, Vol. I, pp. xxxvii, 27, 145 ; *Transactions of Society of Bombay*, Vol. I, pp. 215, 221. Compare the curious account of an image supposed to represent Mahadeo, in *Journal Asiatique*, I. série, Vol. I, p. 354, Paris, 1822.

monstrous about them: as Vishnu with four hands, Brahma with five heads, and the like.¹ But the gods of Greece were always represented in forms entirely human.² In that country no artist would have gained attention if he had presumed to portray them in any other shape. He might make them stronger than men, he might make them more beautiful; but still they must be men. The analogy between God and man, which excited the religious feelings of the Greeks, would have been fatal to those of the Hindus.

This difference between the artistic expressions of the two religions was accompanied by an exactly similar difference between their theological traditions. In the Indian books the imagination is exhausted in relating the feats of the gods; and the more obviously impossible any achievement is, the greater the pleasure with which it was ascribed to them. But the Greek gods had not only human forms but also human attributes, human pursuits, and human tastes.³ The men of Asia, to whom every object of

¹ Ward on the Religion of the Hindoos, Vol. I, p. 35; *Transactions of Society of Bombay*, Vol. I, p. 223. Compare the gloss in the Dabistan, Vol. II, p. 202.

² "The Greek gods were formed like men, with greatly increased powers and faculties, and acted as men would do if so circumstanced, but with a dignity and energy suited to their nearer approach to perfection. The Hindu gods, on the other hand, though endued with human passions, have always something monstrous in their appearance, and wild and capricious in their conduct. They are of various colors, red, yellow, and blue; some have twelve heads, and some have four hands. They are often enraged without a cause, and reconciled without a motive" (Elphinstone's History of India, pp. 96, 97). See also Erskine on the Temple of Elephanta, in *Transactions of Society of Bombay*, Vol. I, p. 246; and the Dabistan, Vol. I, p. cxi.

³ "In the material polytheism of other leading ancient nations the Egyptians, for example, the incarnation of the Deity was chiefly, or exclusively, confined to animals, monsters, or other fanciful emblems. . . . In Greece, on the other hand, it was an almost necessary result of the spirit and grace with which the deities were embodied in human forms, that they should also be burdened with human interests and passions. Heaven, like earth, had its courts and palaces, its trades and professions, its marriages, intrigues, divorces" (Mure's History of the Literature of Ancient Greece, Vol. I, pp. 471, 472). So, too, Tennemann (*Geschichte der Philosophie*, Vol. III, p. 419): "Diese Götter haben Menschengestalt. . . . Haben die Götter aber nicht nur menschliche Gestalt, sondern auch einen menschlichen Körper, so sind sie als Menschen auch denselben Unvollkommenheiten, Krankheiten und dem Tode unterworfen; dieses streitet mit dem Begriffe," i.e. of Epicurus. Compare Grote's History of Greece, Vol. I, p. 596: "The mythical

nature was a source of awe, acquired such habits of reverence that they never dared to assimilate their own actions with the actions of their deities. The men of Europe, encouraged by the safety and inertness of the material world, did not fear to strike a parallel, from which they would have shrunk had they lived amid the dangers of a tropical country. It is thus that the Greek divinities are so different from those of the Hindus that in comparing them we seem to pass from one creation into another. The Greeks generalized their observations upon the human mind, and then applied them to the gods.¹ The coldness of women was figured in Diana ; their beauty and sensuality in Venus ; their pride in Juno ; their accomplishments in Minerva. To the ordinary avocations of the gods the same principle was applied. Neptune was a sailor ; Vulcan was a smith ; Apollo was sometimes a fiddler, sometimes a poet, sometimes a keeper of oxen. As to Cupid, he was a wanton boy, who played with his bow and arrows ; Jupiter was an amorous and good-natured king ; while Mercury was indifferently represented either as a trustworthy messenger or else as a common and notorious thief.

Precisely the same tendency to approximate human forces towards superhuman ones is displayed in another peculiarity of the Greek religion. I mean, that in Greece we for the first time meet with hero worship, that is, the deification of mortals. According to the principles already laid down, this could not be expected in a tropical civilization, where the Aspects of Nature filled man with a constant sense of his own incapacity. It is therefore natural that it should form no part of the ancient Indian religion ;² neither was it known to the Egyptians,³ nor to the

age was peopled with a mingled aggregate of gods, heroes, and men, so confounded together that it was often impossible to distinguish to which class any individual name belonged." See also the complaint of Xenophanes, in Müller's *History of Literature of Greece*, p. 251, London, 1856.

¹ The same remark applies to beauty of form, which they first aimed at in the statues of men, and then brought to bear upon the statues of the gods. This is well put in Mr. Grote's important work, *History of Greece*, 1847, Vol. IV, pp. 133, 134.

² "But the worship of deified heroes is no part of that system" (Colebrooke on the Vedas, in *Asiatic Researches*, Vol. VIII, p. 495).

³ Mackay's *Religious Development*, Vol. II, p. 53, London, 1850. Compare Wilkinson's *Ancient Egyptians*, Vol. IV, pp. 148, 318, and Matter, *Histoire de*

Persians,¹ nor, so far as I am aware, to the Arabians.² But in Greece man being less humbled, and as it were less eclipsed, by the external world, thought more of his own powers, and human nature did not fall into that discredit in which it elsewhere sank. The consequence was, that the deification of mortals was a recognized part of the national religion at a very early period in the history of Greece;³ and this has been found so natural to Europeans that the same custom was afterwards renewed with eminent success by the Romish Church. Other circumstances of a very different character are gradually eradicating this form of idolatry; but its existence is worth observing as one of the innumerable illustrations of the way in which European civilization has diverged from all those that preceded it.⁴

It is thus that in Greece everything tended to exalt the dignity of man, while in India everything tended to depress it.⁵ To sum

l'École d'Alexandrie, Vol. I, p. 2; the "culte des grands hommes," which afterwards arose in Alexandria (*Matter*, Vol. I, p. 54) must have been owing to Greek influence.

¹ There are no indications of it in the *Zendavesta*; and Herodotus says that the Persians were unlike the Greeks, in so far as they disbelieved in a god having a human form (*Book I*, chap. cxxxi, Vol. I, p. 308: οὐκ ἀνθρωποφύτας ἐνόμισαν τοὺς θεούς, κατὰ μέρος ἢ Ἑλλήνας, εἶναι).

² I am not acquainted with any evidence connecting this worship with the old Arabian religion, and it was certainly most alien to the spirit of Mohammedanism.

³ *Mure's History of the Literature of Greece*, Vol. I, pp. 28, 500; Vol. II, p. 402: very good remarks on a subject handled unsatisfactorily by Coleridge (*Literary Remains*, Vol. I, p. 185). Thirlwall (*History of Greece*, Vol. I, p. 207) admits that "the views and feelings out of which it (the worship of heroes) arose seem to be clearly discernible in the Homeric poems." Compare Cudworth's *Intellectual System*, Vol. II, pp. 226, 372. In the *Cratylus*, chap. xxxiii, Socrates is represented as asking, Οὐκ οἶσθα ὅτι ἡμιθεοὶ οἱ ἥρωες (*Platonis Opera*, Vol. IV, p. 227, edit. Bekker, London, 1826). And in the next century Alexander obtained for his friend Hephestion the right of being "worshiped as a hero" (*Grote's History of Greece*, Vol. XII, p. 339).

⁴ The adoration of the dead, and particularly the adoration of martyrs, was one great point of opposition between the orthodox church and the Manicheans (*Beausobre, Histoire Critique de Manichéisme*, Vol. I, p. 316; Vol. II, pp. 651, 669); and it is easy to understand how abhorrent such a practice must have been to the Persian heretics.

⁵ M. Cousin, in his eloquent and ingenious work (*Histoire de la Philosophie*, III. série, Vol. I, pp. 183-187), has some judicious observations on what he calls "l'époque de l'infini" of the East, contrasted with that "du fini," which began in Europe. But as to the physical causes of this, he only admits the grandeur of

up the whole, it may be said that the Greeks had more respect for human powers, the Hindus for superhuman. The first dealt more with the known and available ; the other with the unknown and mysterious.¹ And by a parity of reasoning, the imagination, which the Hindus, being oppressed by the pomp and majesty of nature, never sought to control, lost its supremacy in the little peninsula of ancient Greece. In Greece, for the first time in the history of the world, the imagination was in some degree tempered and confined by the understanding. Not that its strength was impaired, or its vitality diminished. It was broken in and tamed ; its exuberance was checked, its follies were chastised. But that its energy remained, we have ample proof in those productions of the Greek mind which have survived to our own time. The gain, therefore, was complete, since the inquiring and skeptical faculties of the human understanding were cultivated, without destroying the reverential and poetic instincts of the imagination. Whether or not the balance was accurately adjusted is another question ; but it is certain that the adjustment was more nearly arrived at in Greece than in any previous civilization.² There can, I think, be little doubt that, notwithstanding what

nature, overlooking those natural elements of mystery and of danger by which religious sentiments were constantly excited.

¹ A learned Orientalist says that no people have made such efforts as the Hindus "to solve, exhaust, comprehend, what is insolvable, inexhaustible, incomprehensible" (Troyer's Preliminary Discourse on the Dabistan, Vol. I, p. cviii).

² This is noticed by Tennemann, who, however, has not attempted to ascertain the cause : "Die Einbildungskraft des Griechen war schöpferisch, sie schuf in seinen Innern neue Ideenwelten ; aber er wurde doch nie verleitet, die idealische Welt mit der wirklichen zu verwechseln, weil sie immer mit einem richtigen Verstande und gesunder Beurtheilungskraft verbunden war" (Geschichte der Philosophie, Vol. I, p. 8) ; and in Vol. VI, p. 490, he says : "Bei allen diesen Mängeln und Fehlern sind doch die Griechen die einzige Nation der alten Welt, welche Sinn für Wissenschaft hatte, und zu diesem Behufe forschte. Sie haben doch die Bahn gebrochen, und den Weg zur Wissenschaft geebnet." To the same effect, see Sprengel, Histoire de la Médecine, Vol. I, p. 215. And on this distance between the Eastern and the European mind, see Matter, Histoire du Gnosticisme, Vol. I, pp. 18, 233, 234. So, too, Kant (Logik, in Kant's Werke, Vol. I, p. 350) : "Unter allen Völkern haben also die Griechen erst angefangen zu philosophiren. Denn sie haben zuerst versucht, nicht an dem Leitfaden der Bilder die Vernunftkenntnisse zu cultiviren, sondern *in abstracto* ; statt dass die anderen Völker sich die Begriffe immer nur durch Bilder *in concreto* verständlich zu machen suchten."

was effected, too much authority was left to the imaginative faculties, and that the purely reasoning ones did not receive, and never have received, sufficient attention. Still, this does not affect the great fact that the Greek literature is the first in which this deficiency was somewhat remedied, and in which there was a deliberate and systematic attempt to test all opinions by their consonance with human reason, and thus vindicate the right of man to judge for himself on matters which are of supreme and incalculable importance.

I have selected India and Greece as the two terms of the preceding comparison, because our information respecting those countries is most extensive, and has been most carefully arranged. But everything we know of the other tropical civilizations confirms the views I have advocated respecting the effects produced by the Aspects of Nature. In Central America extensive excavations have been made, and what has been brought to light proves that the national religion was, like that of India, a system of complete and unmitigated terror.¹ Neither there nor in Mexico, nor in Peru, nor in Egypt, did the people desire to represent their deities in human forms, or ascribe to them human attributes. Even their temples are huge buildings, often constructed with great skill, but showing an evident wish to impress the mind with fear, and offering a striking contrast to the lighter and smaller structures which the Greeks employed for religious purposes. Thus, even in the style of architecture do we see the same principle at work; the dangers of the tropical civilization being more suggestive of the infinite, while the safety of the European civilization was more suggestive of the finite. To follow out the consequences of this great antagonism, it would be necessary to indicate how the infinite, the imaginative, the synthetic, and the deductive are all connected; and are opposed, on the other hand, by the finite, the skeptical, the analytic, and the

¹ Thus, of one of the idols at Copan, "The intention of the sculptor seems to have been to excite terror" (Stephens' *Central America*, Vol. I, p. 152); at p. 159, "The form of sculpture most generally used was a death's head." At Mayapan (Vol. III, p. 133), "representations of human figures, or animals with hideous features and expressions, in producing which the skill of the artist seems to have been expended"; and again, p. 412, "unnatural and grotesque faces."

inductive. A complete illustration of this would carry me beyond the plan of this Introduction, and would perhaps exceed the resources of my own knowledge; and I must now leave to the candor of the reader what I am conscious is but an imperfect sketch, but what may, nevertheless, suggest to him materials for future thought, and, if I might indulge the hope, may open to historians a new field, by reminding them that everywhere the hand of nature is upon us, and that the history of the human mind can only be understood by connecting with it the history and the aspects of the material universe.

[This remarkable chapter from Buckle is presented, as nearly as possible, as it was originally published. It is by far the strongest presentation ever made of the materialistic conception of history. The difference between Buckle's method and that of Karl Marx, e.g., is essentially the difference between the positive and the metaphysical methods so admirably set forth by Auguste Comte (see pages 15 to 64 of this book). Buckle's vast learning and irresistible logic make this work, and especially this chapter, a monument to his genius which time is not likely to mar. Certainly, in this age, ignorance of Buckle argues an incomplete education as truly as does an ignorance of Adam Smith or of Darwin. — ED.]

XI

THE ZONE OF THE FOUNDERS OF RELIGION¹

It would appear from this that there is no apparent connection between the greater precariousness of life at any given place of abode, or between the national food, and the local religious creations. But we may, perhaps, find something serviceable where we should least expect it, among the old Arabian geographers. Although they were disciples of the Alexandrian Greeks, and familiar with the Ptolemaic division into degrees, in their popular expositions of their science they nevertheless distributed the earth into climates, or, as we are wont to express it, into climatic zones. These zones were not always of the same breadth, but were about seven degrees, more or less. Each zone was supposed to possess certain products, animal, vegetable, and mineral, in special perfection; even towards the close of the Middle Ages our schoolmen believed that black men were to be found only on or close to the equator, and that gold and precious stones never occur beyond the limits of the second zone. In the language of this systematic error, Shemseddin, who was named Demeshqi, after his native city of Damascus, stated that people of light color and high intellectual endowments are limited to the third and fourth climates, or between 19° and $33^{\circ} 49'$ north latitude, and that in these zones were born all the great founders of religion, philosophers, and scholars, himself included. This zone begins a little to the south of the parallel of Mecca ($21^{\circ} 21'$), a great deal to the south of the parallel of Kapilavastu (27°), the birthplace of the Buddha Gautama; on the other hand, its northern margin does not include Rai (Rhagae) near Teheran, and still less Balkh (Bactra). As we have already mentioned, it was in one

¹ From *The Races of Man*, from the German of Oscar Peschel, pp. 314-318, New York, 1894. By permission of D. Appleton & Co.

of these towns that Zoroaster was born. Yet there is some truth in the observation of the Arabian geographers, that the founders of the higher and still existing religions, Zoroaster, Moses, Buddha, Christ, and Mohammed, belong to the subtropical zone. For the birthplace of the latest of the prophets alone falls within the tropics, though only by about seventy-four miles. We make no mention of Confucius, not on account of the high latitude of his birthplace in the district of Yen-chau, in the province of Shan-tung, but because we should degrade the other founders of religion were we to reckon the Chinese moralists among their number.

The fact that the zone of religious founders does not lie within temperate latitudes might be explained by the supposition that it was only in the presence of advanced intellectual development that mankind was able to add a yet higher dignity to human existence by allegiance to ideal objects, and that it was exactly in the subtropical climates that the most ancient social organizations had flourished. But even when civilization in its advance had passed outside the tropics, subtropical Asia still remained the fruitful parent of religions. Christianity did not make its appearance in the overrefined European empire of the Romans, but in Palestine. Islam came into existence six hundred years later, not in Byzantium, but in Arabia. In the cold of the temperate zone man has always been obliged to struggle hard for his existence, working more than praying, so that the burden of the day's labor constantly withheld him from deep inward meditation. In warm countries, on the contrary, where nature facilitates the acquisition of the necessities of life, and the sultry hours of mid-day prohibit any bodily exertions, opportunities for mental absorption are far more abundant.

The place of abode is not, however, quite without influence on the direction taken by religious thought. The three monotheistic doctrines, Judaism, Christianity, Islam, originated with the Semitic nations, yet the tendency of the race was not exclusively to monotheism; for other Semites, such as the Phœnicians, Chaldeans, and Assyrians, took other courses, while even among the Jews reversion to polytheism was frequent, and in Egypt

especially the people of God sank completely into idolatry. The perpetual reappearance of monotheism received powerful support from the surrounding scenes of nature.

All who have been in the desert extol its beneficent influence on the health and spirits. Aloys Sprenger declares that the air of the desert invigorated him more than that of the high Alps or of the Himalayas, and in a letter to the author he says: "The desert has impressed the Arabs with their remarkable historical character. In the boundless plains the imagination which guides the youth of men is filled with images quite different from those suggested by forest country. The thoughts thus acquired are rather noble than numerous; out of his own consciousness of power man evolves for himself a yet bolder personality — a personal God by whom he is guided in his wanderings." Lastly, in nomadic life, it frequently happens that a herdsman roams about in solitude for weeks, tortured by hunger and thirst. Even the healthiest then suffers from illusions of the senses. In this state it often occurs that the forsaken wanderer hears voices speaking and calling to him; hence in Arabic there is a special word *Hâtif* for voices of this sort. In Africa, again, *Ragl*, derived from *Ragol*, the man, signifies such anthropomorphous ocular illusions.

Every traveler who has crossed the deserts of Arabia and Asia Minor speaks enthusiastically of their beauties; all praise their atmosphere and brightness, and tell of a feeling of invigoration and a perceptible increase of intellectual elasticity; hence between the arched heavens and the unbounded expanse of plain a monotheistic frame of mind necessarily steals upon the children of the desert. The confusion of the Egyptian pantheon, the beautiful images of stone, the sacred animals, the human figures with emblematic heads and symbols, were not forgotten by Moses, the priest of Heliopolis, until he fled to Sinai, the oldest rock known to geology, which, according to Oscar Fraas, is still uncovered by the smallest particle of any more recent formation, seeming as if it had never been submerged beneath the sea, had never risen up, never moved. Here in the wilderness it was necessary that the old Jewish race, with its Egyptian paganism, should be buried, before monotheism as a result of the thoughts

and sights of the desert, could rise and strengthen itself in a new race. In other parts of the Scriptures the healthy influence of the desert is likewise testified. The zealous Elijah retired into the desert; John the Baptist also preached in the desert of Jordan, clad as a Bedouin, in a raiment of camel's hair, and living on locusts and wild honey. Christ also prepared himself for his career by passing forty days and forty nights in the desert. Lastly, Mohammed, although born in a city, imbibed the milk of a Bedouin foster mother, lived for a long time as a shepherd, and in his caravan journeys crossed the deserts between his own country and Palestine. The pilgrimages to Mecca, although far more ancient than Islam, are of no little service in strengthening the faith, inasmuch as they are preceded by a journey across the desert. But even independently of this, the followers of the Prophet live in the vicinity of deserts, for the doctrine of Mohammed has spread almost exclusively in the zone of eastern monsoons, and only in very late times extended into Africa as far as the Sudan. In India it was unable to extend beyond very narrow limits, and that only with political assistance.

This is probably all that can be accurately ascertained in regard to the influence of the nature of the country on the tendency of the religious feeling of the population. The desert contributes materially to awakening monotheism, because, from the dryness and clearness of its atmosphere, it does not expose the senses to all the attractive phantoms of forest scenery, — the sunbeams as they play through the openings in the trees on the trembling and shining leaves, the marvelous forms of the gnarled branches, creeping roots, and storm-stricken trunks; the creaking and sighing, the whispering and roaring, the hissing and rustling, and all the voices and sounds in wood and forest, amid which the illusion of an invisible animation is so apt to overcome us. Neither do curling mists sweep and steal over the desert as on damp meadow lands. These cloud forms, as they rise over the forests of New Guinea, are venerated by the nations of Doreh as a visible manifestation of their good spirit Narvojé. It may therefore be asserted that with the extermination of the forests not only is the climate of the locality altered, but poetry and

paganism have also been struck with the ax. But if a sunny land is favorable to monotheistic emotions, yet at the same time every religious creation is but an expression of the mental endowments of the race. The Semites never possessed any genuinely epic literature, and their dramatic literature was extremely scanty, for they were destitute of the Aryan capacity for framing such productions. It would be an error to trace all the intellectual productions of nations to previous physical conditions alone. They are assuredly subject to a normal course of development, and are nothing more than the necessary expression of a series of causes. But the historical destinies of the nations are certainly among these causes. "It is an old maxim," says Delbrück, "that it is in the experiences of life that each individual finds or loses his God."

XII

SEXUAL SELECTION IN RELATION TO MAN¹

PRINCIPLES OF SEXUAL SELECTION

With animals which have their sexes separated, the males necessarily differ from the females in their organs of reproduction; and these are the primary sexual characters. But the sexes often differ in what Hunter has called secondary sexual characters, which are not directly connected with the act of reproduction; for instance, the male possesses certain organs of sense or locomotion, of which the female is quite destitute, or has them more highly developed, in order that he may readily find or reach her; or again the male has special organs of prehension for holding her securely. These latter organs, of infinitely diversified kinds, graduate into those which are commonly ranked as primary, and in some cases can hardly be distinguished from them; we see instances of this in the complex appendages at the apex of the abdomen in male insects. Unless indeed we confine the term "primary" to the reproductive glands, it is scarcely possible to decide which ought to be called primary and which secondary.

The female often differs from the male in having organs for the nourishment or protection of her young, such as the mammary glands of mammals and the abdominal sacks of the marsupials. In some few cases also the male possesses similar organs, which are wanting in the female, such as the receptacles for the ova in certain male fishes, and those temporarily developed in certain male frogs. The females of most bees are provided with a special apparatus for collecting and carrying pollen, and their ovipositor is modified into a sting for the defense of the larvæ and the community. Many similar cases could be given, but they do not here concern us. There are, however, other sexual differences

¹ From *The Descent of Man*, by Charles Darwin, second edition, London, 1874.

quite unconnected with the primary reproductive organs, and it is with these that we are more especially concerned, — such as the greater size, strength, and pugnacity of the male, his weapons of offense or means of defense against rivals, his gaudy coloring and various ornaments, his power of song, and other such characters.

Besides the primary and secondary sexual differences, such as the foregoing, the males and females of some animals differ in structures related to different habits of life, and not at all, or only indirectly, to the reproductive functions. Thus the females of certain flies (*Culicidæ* and *Tabanidæ*) are blood suckers, while the males, living on flowers, have mouths destitute of mandibles.¹ The males of certain moths and of some crustaceans (e.g. *Tanais*) have imperfect, closed mouths, and cannot feed. The complementary males of certain Cirripedes live like epiphytic plants either on the female or the hermaphrodite form, and are destitute of a mouth and of prehensile limbs. In these cases it is the male which has been modified and has lost certain important organs, which the females possess. In other cases it is the female which has lost such parts; for instance, the female glowworm is destitute of wings, as also are many female moths, some of which never leave their cocoons. Many female parasitic crustaceans have lost their natatory legs. In some weevil beetles (*Curculionidæ*) there is a great difference between the male and female in the length of the rostrum or snout;² but the meaning of this and of many analogous differences is not at all understood. Differences of structure between the two sexes in relation to different habits of life are generally confined to the lower animals; but with some few birds the beak of the male differs from that of the female. In the *Huia* of New Zealand the difference is wonderfully great, and we hear from Dr. Buller³ that the male uses his strong beak in chiseling the larvæ of insects out of decayed wood, while the female probes the softer parts with her far longer, much curved, and pliant beak; and thus they mutually aid each

¹ Westwood, *Modern Classification of Insects*, Vol. II, 1840, p. 541. For the statement about *Tanais*, mentioned below, I am indebted to Fritz Müller.

² Kirby and Spence, *Introduction to Entomology*, Vol. III, 1826, p. 309.

³ *Birds of New Zealand*, 1872, p. 66.

other. In most cases, differences of structure between the sexes are more or less directly connected with the propagation of the species; thus a female, which has to nourish a multitude of ova, requires more food than the male, and consequently requires special means for procuring it. A male animal, which lives for a very short time, might lose its organs for procuring food through disuse, without detriment; but he would retain his locomotive organs in a perfect state, so that he might reach the female. The female, on the other hand, might safely lose her organs for flying, swimming, or walking, if she gradually acquired habits which rendered such powers useless.

We are, however, here concerned only with sexual selection. This depends on the advantage which certain individuals have over others of the same sex and species solely in respect of reproduction. When, as in the cases above mentioned, the two sexes differ in structure in relation to different habits of life, they have no doubt been modified through natural selection, and by inheritance limited to one and the same sex. So again the primary sexual organs, and those for nourishing or protecting the young, come under the same influence; for those individuals which generated or nourished their offspring best would leave, *cæteris paribus*, the greatest number to inherit their superiority; while those which generated or nourished their offspring badly would leave but few to inherit their weaker powers. As the male has to find the female, he requires organs of sense and locomotion, but if these organs are necessary for the other purposes of life, as is generally the case, they will have been developed through natural selection. When the male has found the female he sometimes absolutely requires prehensile organs to hold her; thus Dr. Wallace informs me that the males of certain moths cannot unite with the females if their tarsi or feet are broken. The males of many oceanic crustaceans, when adult, have their legs and antennæ modified in an extraordinary manner for the prehension of the female; hence we may suspect that it is because these animals are washed about by the waves of the open sea that they require these organs in order to propagate their kind, and if so, their development has been the result of

ordinary or natural selection. Some animals extremely low in the scale have been modified for this same purpose; thus the males of certain parasitic worms, when fully grown, have the lower surface of the terminal part of their bodies roughened like a rasp, and with this they coil round and permanently hold the females.¹

When the two sexes follow exactly the same habits of life, and the male has the sensory or locomotive organs more highly developed than those of the female, it may be that the perfection of these is indispensable to the male for finding the female; but in the vast majority of cases they serve only to give one male an advantage over another, for with sufficient time the less well-endowed males would succeed in pairing with the females; and judging from the structure of the female, they would be in all other respects equally well adapted for their ordinary habits of life. Since in such cases the males have acquired their present structure, not from being better fitted to survive in the struggle for existence, but from having gained an advantage over other males, and from having transmitted this advantage to their male offspring alone, sexual selection must here have come into action. It was the importance of this distinction which led me to designate this form of selection as Sexual Selection. So again, if the chief service rendered to the male by his prehensile organs is to prevent the escape of the female before the arrival of other males, or when assaulted by them, these organs will have been perfected through sexual selection, that is, by the advantage acquired by certain individuals over their rivals. But in most cases of this kind it is impossible to distinguish between the effects of natural and sexual selection. Whole chapters could be filled with details

¹ M. Perrier advances this case (*Revue Scientifique*, February 1, 1873, p. 865) as one fatal to the belief in sexual selection, inasmuch as he supposes that I attribute all the differences between the sexes to sexual selection. This distinguished naturalist, therefore, like so many other Frenchmen, has not taken the trouble to understand even the first principles of sexual selection. An English naturalist insists that the claspers of certain male animals could not have been developed through the choice of the female! Had I not met with this remark, I should not have thought it possible for any one to have read this chapter and to have imagined that I maintain that the choice of the female had anything to do with the development of the prehensile organs in the male.

on the differences between the sexes in their sensory, locomotive, and prehensile organs. As, however, these structures are not more interesting than others adapted for the ordinary purposes of life, I shall pass them over almost entirely, giving only a few instances under each class.

There are many other structures and instincts which must have been developed through sexual selection, such as the weapons of offense and the means of defense of the males for fighting with and driving away their rivals, their courage and pugnacity, their various ornaments, their contrivances for producing vocal or instrumental music, and their glands for emitting odors, most of these latter structures serving only to allure or excite the female. It is clear that these characters are the result of sexual and not of ordinary selection, since unarmed, unornamented, or unattractive males would succeed equally well in the battle for life and in leaving a numerous progeny, but for the presence of better endowed males. We may infer that this would be the case, because the females, which are unarmed and unornamented, are able to survive and procreate their kind. Secondary sexual characters of the kind just referred to will be fully discussed in the following chapters, as being in many respects interesting, but especially as depending on the will, choice, and rivalry of the individuals of either sex. When we behold two males fighting for the possession of the female, or several male birds displaying their gorgeous plumage, and performing strange antics before an assembled body of females, we cannot doubt that, though led by instinct, they know what they are about, and consciously exert their mental and bodily powers.

Just as man can improve the breed of his gamecocks by the selection of those birds which are victorious in the cockpit, so it appears that the strongest and most vigorous males, or those provided with the best weapons, have prevailed under nature, and have led to the improvement of the natural breed or species. A slight degree of variability leading to some advantage, however slight, in reiterated deadly contests would suffice for the work of sexual selection; and it is certain that secondary sexual characters are eminently variable. Just as man can give beauty, according

to his standard of taste, to his male poultry, or, more strictly, can modify the beauty originally acquired by the parent species, can give to the Sebright bantam a new and elegant plumage, an erect and peculiar carriage, so it appears that female birds in a state of nature have by a long selection of the more attractive males added to their beauty or other attractive qualities. No doubt this implies powers of discrimination and taste on the part of the female which will at first appear extremely improbable; but by the facts to be adduced hereafter, I hope to be able to show that the females actually have these powers. When, however, it is said that the lower animals have a sense of beauty, it must not be supposed that such sense is comparable with that of a cultivated man, with his multiform and complex associated ideas. A more just comparison would be between the taste for the beautiful in animals and that in the lowest savages, who admire and deck themselves with any brilliant, glittering, or curious object.

From our ignorance on several points the precise manner in which sexual selection acts is somewhat uncertain. Nevertheless, if those naturalists who already believe in the mutability of species will read the following chapters, they will, I think, agree with me that sexual selection has played an important part in the history of the organic world. It is certain that among almost all animals there is a struggle between the males for the possession of the female. This fact is so notorious that it would be superfluous to give instances. Hence the females have the opportunity of selecting one out of several males, on the supposition that their mental capacity suffices for the exertion of a choice. In many cases special circumstances tend to make the struggle between the males particularly severe. Thus the males of our migratory birds generally arrive at their places of breeding before the females, so that many males are ready to contend for each female. I am informed by Mr. Jenner Weir that the bird-catchers assert that this is invariably the case with the nightingale and blackcap, and with respect to the latter he can himself confirm the statement.

Mr. Swaysland of Brighton has been in the habit, during the last forty years, of catching our migratory birds on their first

arrival, and he has never known the females of any species to arrive before their males. During one spring he shot thirty-nine males of Ray's wagtail (*Budytes Raii*) before he saw a single female. Mr. Gould has ascertained by the dissection of those snipes which arrive the first in this country that the males come before the females. And the like holds good with most of the migratory birds of the United States.¹ The majority of the male salmon in our rivers, on coming up from the sea, are ready to breed before the females. So it appears to be with frogs and toads. Throughout the great class of insects the males almost always are the first to emerge from the pupal state, so that they generally abound for a time before any females can be seen.² The cause of this difference between the males and females in their periods of arrival and maturity is sufficiently obvious. Those males which annually first migrated into any country, or which in the spring were first ready to breed, or were the most eager, would leave the largest number of offspring; and these would tend to inherit similar instincts and constitutions. It must be borne in mind that it would have been impossible to change very materially the time of sexual maturity in the females without at the same time interfering with the period of the production of the young, — a period which must be determined by the seasons of the year. On the whole, there can be no doubt that with almost all animals, in which the sexes are separate, there is a constantly recurrent struggle between the males for the possession of the females.

Our difficulty in regard to sexual selection lies in understanding how it is that the males which conquer other males, or those which prove the most attractive to the females, leave a greater number of offspring to inherit their superiority than their beaten

¹ J. A. Allen, on the "Mammals and Winter Birds of E. Florida," *Bull. Comp. Zoölogy* (Harvard College), p. 268.

² Even with those plants in which the sexes are separate, the male flowers are generally mature before the female. As first shown by C. K. Sprengel, many hermaphrodite plants are dichogamous; that is, their male and female organs are not ready at the same time, so that they cannot be self-fertilized. Now in such flowers the pollen is in general matured before the stigma, though there are exceptional cases in which the female organs are beforehand.

and less attractive rivals. Unless this result does follow, the characters which give to certain males an advantage over others could not be perfected and augmented through sexual selection. When the sexes exist in exactly equal numbers the worst-endowed males will (except where polygamy prevails) ultimately find females, and leave as many offspring, as well fitted for their general habits of life, as the best-endowed males. From various facts and considerations I formerly inferred that with most animals in which secondary sexual characters are well developed, the males considerably exceeded the females in number; but this is not by any means always true. If the males were to the females as two to one, or as three to two, or even in a somewhat lower ratio, the whole affair would be simple; for the better-armed or more attractive males would leave the largest number of offspring. But after investigating as far as possible the numerical proportion of the sexes, I do not believe that any great inequality in number commonly exists. In most cases sexual selection appears to have been effective in the following manner.

Let us take any species, a bird for instance, and divide the females inhabiting a district into two equal bodies, the one consisting of the more vigorous and better-nourished individuals, and the other of the less vigorous and healthy. The former, there can be little doubt, would be ready to breed in the spring before the others; and this is the opinion of Mr. Jenner Weir, who has carefully attended to the habits of birds during many years. There can also be no doubt that the most vigorous, best-nourished, and earliest breeders would on an average succeed in rearing the largest number of fine offspring.¹ The males, as we have seen, are generally ready to breed before the females; the strongest, and with some species the best armed of the males, drive away the weaker; and the former would then unite with the

¹ Here is excellent evidence on the character of the offspring from an experienced ornithologist. Mr. J. A. Allen, in speaking ("Mammals and Winter Birds of E. Florida," p. 229) of the later broods, after the accidental destruction of the first, says, that these "are found to be smaller and paler-colored than those hatched earlier in the season. In cases where several broods are reared each year, as a general rule the birds of the earlier broods seem in all respects the most perfect and vigorous."

more vigorous and better-nourished females, because they are the first to breed.¹ Such vigorous pairs would surely rear a larger number of offspring than the retarded females, which would be compelled to unite with the conquered and less powerful males, supposing the sexes to be numerically equal; and this is all that is wanted to add, in the course of successive generations, to the size, strength, and courage of the males, or to improve their weapons.

But in very many cases the males which conquer their rivals do not obtain possession of the females, independently of the choice of the latter. The courtship of animals is by no means so simple and short an affair as might be thought. The females are most excited by, or prefer pairing with, the more ornamented males, or those which are the best songsters, or play the best antics; but it is obviously probable that they would at the same time prefer the more vigorous and lively males, and this has in some cases been confirmed by actual observation.² Thus the more vigorous females, which are the first to breed, will have the choice of many males; and though they may not always select the strongest or best armed, they will select those which are vigorous and well armed, and in other respects the most attractive. Both sexes, therefore, of such early pairs would, as above explained, have an advantage over others in rearing offspring; and this apparently has sufficed during a long course of generations to add not only to the strength and fighting powers of the males, but likewise to their various ornaments or other attractions.

In the converse and much rarer case of the males selecting particular females, it is plain that those which were the most vigorous and had conquered others would have the freest choice; and it is almost certain that they would select vigorous as well

¹ Hermann Müller has come to this same conclusion with respect to those female bees which are the first to emerge from the pupa each year. See his remarkable essay, "Anwendung der Darwin'schen Lehre auf Bienen," *Verhandlungen des naturhistorischen Vereins*, Jahrgang XXIX, p. 45.

² With respect to poultry, I have received information, hereafter to be given, to this effect. Even with birds, such as pigeons, which pair for life, the female, as I hear from Mr. Jenner Weir, will desert her mate if he is injured or grows weak.

as attractive females. Such pairs would have an advantage in rearing offspring, more especially if the male had the power to defend the female during the pairing season, as occurs with some of the higher animals, or aided her in providing for the young. The same principles would apply if each sex preferred and selected certain individuals of the opposite sex, supposing that they selected not only the more attractive but likewise the more vigorous individuals.

Numerical Proportion of the Two Sexes

I have remarked that sexual selection would be a simple affair if the males were considerably more numerous than the females. Hence I was led to investigate, as far as I could, the proportions between the two sexes of as many animals as possible; but the materials are scanty. I will here give only a brief abstract of the results, retaining the details for a supplementary discussion, so as not to interfere with the course of my argument. Domesticated animals alone afford the means of ascertaining the proportional numbers at birth; but no records have been specially kept for this purpose. By indirect means, however, I have collected a considerable body of statistics, from which it appears that with most of our domestic animals the sexes are nearly equal at birth. Thus 25,560 births of race horses have been recorded during twenty-one years, and the male births were to the female births as 99.7 to 100. In greyhounds the inequality is greater than with any other animal, for out of 6878 births during twelve years, the male births were to the female as 110.1 to 100. It is, however, in some degree doubtful whether it is safe to infer that the proportion would be the same under natural conditions as under domestication; for slight and unknown differences in the conditions affect the proportion of the sexes. Thus with mankind, the male births in England are as 104.5, in Russia as 108.9, and with the Jews of Livonia as 120, to 100 female births. At the Cape of Good Hope, however, male children of European extraction have been born during several years in the proportion of between 90 and 99 to 100 female children.

For our present purpose we are concerned with the proportion of the sexes not only at birth but also at maturity, and this adds another element of doubt ; for it is a well-ascertained fact that with man the number of males dying before or during birth, and during the first few years of infancy, is considerably larger than that of females. So it almost certainly is with male lambs and probably with some other animals. The males of some species kill one another by fighting, or they drive one another about until they become greatly emaciated. They must also be often exposed to various dangers, while wandering about in eager search for the females. In many kinds of fish the males are much smaller than the females, and they are believed often to be devoured by the latter, or by other fishes. The females of some birds appear to die earlier than the males ; they are also liable to be destroyed on their nests, or while in charge of their young. With insects the female larvæ are often larger than those of the males, and would consequently be more likely to be devoured. In some cases the mature females are less active and less rapid in their movements than the males, and could not escape so well from danger. Hence, with animals in a state of nature, we must rely on mere estimation, in order to judge of the proportions of the sexes at maturity ; and this is but little trustworthy, except when the inequality is strongly marked.

The proportion between the sexes fluctuates slightly during successive years : thus with race horses, for every 100 mares born the stallions varied from 107.1 in one year to 92.6 in another year, and with greyhounds from 116.3 to 95.3. But had larger numbers been tabulated throughout an area more extensive than England, these fluctuations would probably have disappeared, and such as they are, would hardly suffice to lead to effective sexual selection in a state of nature. Nevertheless, in the cases of some few wild animals, the proportions seem to fluctuate either during different seasons or in different localities in a sufficient degree to lead to such selection. For it should be observed that any advantage, gained during certain years or in certain localities by those males which were able to conquer their rivals, or were the most attractive to the females, would probably be transmitted

to the offspring, and would not subsequently be eliminated. During the succeeding seasons when, from the equality of the sexes, every male was able to procure a female, the stronger or more attractive males previously produced would still have at least as good a chance of leaving offspring as the weaker or less attractive.

Polygamy

The practice of polygamy leads to the same results as would follow from an actual inequality in the number of the sexes; for if each male secures two or more females, many males cannot pair; and the latter assuredly will be the weaker or less attractive individuals. Many mammals and some few birds are polygamous, but with animals belonging to the lower classes I have found no evidence of this habit. The intellectual powers of such animals are, perhaps, not sufficient to lead them to collect and guard a harem of females. That some relation exists between polygamy and the development of secondary sexual characters appears nearly certain; and this supports the view that a numerical preponderance of males would be eminently favorable to the action of sexual selection. Nevertheless, many animals, which are strictly monogamous, especially birds, display strongly marked secondary sexual characters; while some few animals, which are polygamous, do not have such characters.

We will first briefly run through the mammals, and then turn to birds. The gorilla seems to be polygamous, and the male differs considerably from the female; so it is with some baboons, which live in herds containing twice as many adult females as males. In South America the *Mycetes caraya* presents well-marked sexual differences, in color, beard, and vocal organs; and the male generally lives with two or three wives; the male of the *Cebus capucinus* differs somewhat from the female, and appears to be polygamous.¹ Little is known on this head with respect to most other monkeys, but some species are strictly

¹ On the gorilla, see Savage and Wyman, *Boston Journal of Natural History*, 1845-1847, Vol. V, p. 423. On *Cynocephalus*, see Brehm, *Illust. Thierleben*, 1864, Band I, Seite 77. On *Mycetes*, see Rengger, *Naturgesch.*: "Säugethiere von Paraguay," 1830, Seite 14, 20. On *Cebus*, see Brehm, *ibid.*, Seite 108.

monogamous. The ruminants are eminently polygamous, and they present sexual differences more frequently than almost any other group of mammals; this holds good, especially in their weapons, but also in other characters. Most deer, cattle, and sheep are polygamous, as are most antelopes, though some are monogamous. Sir Andrew Smith, in speaking of the antelopes of South Africa, says that in herds of about a dozen there was rarely more than one mature male. The Asiatic *Antilope saiga* appears to be the most inordinate polygamist in the world; for Pallas¹ states that the male drives away all rivals and collects a herd of about a hundred females and kids together; the female is hornless and has softer hair, but does not otherwise differ much from the male. The wild horse of the Falkland Islands and of the Western States of North America is polygamous, but, except in his greater size and in the proportions of his body, differs but little from the mare. The wild boar presents well-marked sexual characters, in his great tusks and some other points. In Europe and in India he leads a solitary life, except during the breeding season; but as is believed by Sir W. Elliot, who has had many opportunities in India of observing this animal, he consorts at this season with several females. Whether this holds good in Europe is doubtful, but it is supported by some evidence. The adult male Indian elephant, like the boar, passes much of his time in solitude; but as Dr. Campbell states, when with others, "it is rare to find more than one male with a whole herd of females"; the larger males expelling or killing the smaller and weaker ones. The male differs from the female in his immense tusks, greater size, strength, and endurance; so great is the difference in these respects that the males when caught are valued at one fifth more than the females.² The sexes of other pachydermatous animals differ very little or not at all, and, as far as known, they are not polygamists. Nor have I heard of any

¹ Pallas, *Spicilegium Zoologicum*, 1777, Fasc. XII, p. 29. Sir Andrew Smith's *Illustrations of the Zoölogy of South Africa*, 1849, Plate XXIX, on the Kobus. Owen, in his *Anatomy of Vertebrates* (1868, Vol. III, p. 633), gives a table showing incidentally which species of antelopes are gregarious.

² Dr. Campbell, in *Proc. Zoölog. Soc.*, 1869, p. 138. See also an interesting paper, by Lieutenant Johnstone, in *Proc. Asiatic Soc. of Bengal*, May, 1868.

species in the orders of Cheiroptera, Edentata, Insectivora, and rodents being polygamous, excepting that among the rodents, the common rat, according to some rat-catchers, lives with several females. Nevertheless, the two sexes of some sloths (Edentata) differ in the character and color of certain patches of hair on their shoulders.¹ And many kinds of bats (Cheiroptera) present well-marked sexual differences, chiefly in the males possessing odoriferous glands and pouches, and by their being of a lighter color.² In the great order of Rodents, as far as I can learn, the sexes rarely differ, and when they do so it is but slightly in the tint of the fur.

As I hear from Sir Andr w Smith, the lion in South Africa sometimes lives with a single female, but generally with more, and, in one case, was found with as many as five females; so that he is polygamous. As far as I can discover, he is the only polygamist among all the terrestrial Carnivora, and he alone presents well-marked sexual characters. If, however, we turn to the marine Carnivora, as we shall hereafter see, the case is widely different; for many species of seals offer extraordinary sexual differences, and they are eminently polygamous. Thus, according to P ron, the male sea elephant of the Southern Ocean always possesses several females, and the sea lion of Forster is said to be surrounded by from twenty to thirty females. In the North the male sea bear of Steller is accompanied by even a greater number of females. It is an interesting fact, as Dr. Gill remarks,³ that in the monogamous species, "or those living in small communities, there is little difference in size between the males and females; in the social species, or rather those of which the males have harems, the males are vastly larger than the females."

Among birds, many species, the sexes of which differ greatly from each other, are certainly monogamous. In Great Britain we see well-marked sexual differences, for instance, in the wild duck, which pairs with a single female, the common blackbird, and the bullfinch, which is said to pair for life. I am informed by

¹ Dr. Gray, in *Annals and Magazine of Natural History*, 1871, p. 302.

² See Dr. Dobson's excellent paper, in *Proc. Zo log. Soc.* 1873, p. 241.

³ "The Eared Seals," *American Naturalist*, January, 1871, Vol. IV.

Mr. Wallace that the like is true of the Chatterers or Cotingidæ of South America, and of many other birds. In several groups I have not been able to discover whether the species are polygamous or monogamous. Lesson says that birds of paradise, so remarkable for their sexual differences, are polygamous, but Mr. Wallace doubts whether he had sufficient evidence. Mr. Salvin tells me he has been led to believe that humming birds are polygamous. The male widow bird, remarkable for his caudal plumes, certainly seems to be a polygamist.¹ I have been assured by Mr. Jenner Weir, and by others, that it is somewhat common for three starlings to frequent the same nest; but whether this is a case of polygamy or polyandry has not been ascertained.

The Gallinaceæ exhibit almost as strongly marked sexual differences as birds of paradise or humming birds, and many of the species are, as is well known, polygamous, others being strictly monogamous. What a contrast is presented between the sexes of the polygamous peacock or pheasant and the monogamous guinea fowl or partridge! Many similar cases could be given, as in the grouse tribe, in which the males of the polygamous capercaillie and blackcock differ greatly from the females; while the sexes of the monogamous red grouse and ptarmigan differ very little. In the Cursores, except among the bustards, few species offer strongly marked sexual differences, and the great bustard (*Otis tarda*) is said to be polygamous. With the Grallatores extremely few species differ sexually, but the ruff (*Machetes pugnax*) affords a marked exception, and this species is believed by Montagu to be a polygamist. Hence it appears that among birds there often exists a close relation between polygamy and the development of strongly marked sexual differences. I asked Mr. Bartlett, of the Zoological Gardens, who has had very large experience with birds, whether the male tragopan (one of the Gallinaceæ) was polygamous, and I was struck by his answering, "I do not know, but should think so from his splendid colors."

¹ The Ibis, 1861, Vol. III, p. 133, on the progne widow bird. See also on the *Vidua axillaris*, *ibid.*, 1860, Vol. II, p. 211. On the polygamy of the capercaillie and great bustard, see L. Lloyd's Game Birds of Sweden, 1867, pp. 19, 182. Montagu and Selby speak of the black grouse as polygamous and of the red grouse as monogamous.

It deserves notice that the instinct of pairing with a single female is easily lost under domestication. The wild duck is strictly monogamous, the domestic duck highly polygamous. The Rev. W. D. Fox informs me that out of some half-tamed wild ducks, on a large pond in his neighborhood, so many mallards were shot by the gamekeeper that only one was left for every seven or eight females; yet unusually large broods were reared. The guinea fowl is strictly monogamous; but Mr. Fox finds that his birds succeed best when he keeps one cock to two or three hens. Canary birds pair in a state of nature, but the breeders in England successfully put one male to four or five females. I have noticed these cases, as rendering it probable that wild monogamous species might readily become either temporarily or permanently polygamous.

Too little is known of the habits of reptiles and fishes to enable us to speak of their marriage arrangements. The stickleback (*Gasterosteus*), however, is said to be a polygamist;¹ and the male during the breeding season differs conspicuously from the female.

To sum up on the means through which, as far as we can judge, sexual selection has led to the development of secondary sexual characters; it has been shown that the largest number of vigorous offspring will be reared from the pairing of the strongest and best-armed males, victorious in contests over other males, with the most vigorous and best-nourished females, which are the first to breed in the spring. If such females select the more attractive and at the same time vigorous males, they will rear a larger number of offspring than the retarded females, which must pair with the less vigorous and less attractive males. So it will be if the more vigorous males select the more attractive and at the same time healthy and vigorous females; and this will especially hold good if the male defends the female, and aids in providing food for the young. The advantage thus gained by the more vigorous pairs in rearing a larger number of offspring has apparently sufficed to render sexual selection efficient. But a large numerical preponderance of males over females will be

¹ Noel Humphreys, River Gardens, 1857.

still more efficient, whether the preponderance is only occasional and local, or permanent, whether it occurs at birth, or afterward from the greater destruction of the females, or whether it indirectly follows from the practice of polygamy.

The Male Generally More Modified than the Female

Throughout the animal kingdom, when the sexes differ in external appearance, it is, with rare exceptions, the male which has been the more modified; for generally the female retains a closer resemblance to the young of her own species and to other adult members of the same group. The cause of this seems to lie in the males of almost all animals having stronger passions than the females. Hence it is the males that fight together and sedulously display their charms before the females; and the victors transmit their superiority to their male offspring. Why both sexes do not thus acquire the characters of their fathers will be considered hereafter. That the males of all mammals eagerly pursue the females is notorious to every one. So it is with birds; but many cock birds do not so much pursue the hen as display their plumage, perform strange antics, and pour forth their song in her presence. The male in the few fish observed seems much more eager than the female; and the same is true of alligators, and apparently of Batrachians. Throughout the enormous class of insects, as Kirby remarks,¹ "the law is, that the male shall seek the female." Two good authorities, Mr. Blackwall and Mr. C. Spence Bate, tell me that the males of spiders and crustaceans are more active and more erratic in their habits than the females. When the organs of sense or locomotion are present in the one sex of insects and crustaceans and absent in the other, or when, as is frequently the case, they are more highly developed in the one than in the other, it is, as far as I can discover, almost invariably the male which retains such organs, or has them most developed; and this shows that the male is the more active member in the courtship of the sexes.²

¹ Kirby and Spence, *Introduction to Entomology*, 1826, Vol. III, p. 342.

² One parasitic hymenopterous insect (Westwood, *Modern Classification of Insects*, Vol. II, p. 160) forms an exception to the rule, as the male has rudimentary wings

The female, on the other hand, with the rarest exceptions, is less eager than the male. As the illustrious Hunter¹ long ago observed, she generally "requires to be courted"; she is coy, and may often be seen endeavoring for a long time to escape from the male. Every observer of the habits of animals will be able to call to mind instances of this kind. It is shown by various facts, given hereafter, and by the results fairly attributable to sexual selection, that the female, though comparatively passive, generally exerts some choice and accepts one male in preference to others; or she may accept, as appearances would sometimes lead us to believe, not the male which is the most attractive to her, but the one which is the least distasteful. The exertion of some choice on the part of the female seems a law almost as general as the eagerness of the male.

We are naturally led to inquire why the male, in so many and such distinct classes, has become more eager than the female, so that he searches for her, and plays the more active part in courtship. It would be no advantage and some loss of power if each sex searched for the other; but why should the male almost always be the seeker? The ovules of plants after fertilization have to be nourished for a time; hence the pollen is necessarily brought to the female organs, being placed on the stigma by means of insects or the wind, or by the spontaneous movements of the stamens; and in the Algæ, etc., by the locomotive power of the antherozoids. With lowly organized aquatic animals, permanently affixed to the same spot and having their sexes separate, the male element is invariably brought to the female; and of this we can see the reason, for even if the ova were detached before fertilization, and did not require subsequent nourishment or protection, there would yet be greater difficulty in transporting them than the male element, because, being

and never quits the cell in which it is born, while the female has well-developed wings. Audouin believes that the females of this species are impregnated by the males which are born in the same cells with them; but it is much more probable that the females visit other cells, so that close interbreeding is thus avoided. We shall hereafter meet in various classes, with a few exceptional cases, in which the female, instead of the male, is the seeker and wooer.

¹ *Essays and Observations*, edited by Owen, 1861, Vol. I, p. 194.

larger than the latter, they are produced in far smaller numbers. So that many of the lower animals are, in this respect, analogous with plants.¹ The males of affixed and aquatic animals having been led to emit their fertilizing element in this way, it is natural that any of their descendants, which rose in the scale and became locomotive, should retain the same habit, and they would approach the female as closely as possible, in order not to risk the loss of the fertilizing element in a long passage of it through the water. With some few of the lower animals, the females alone are fixed, and the males of these must be the seekers. But it is difficult to understand why the males of species, of which the progenitors were primordially free, should invariably have acquired the habit of approaching the females, instead of being approached by them. But in all cases, in order that the males should seek efficiently, it would be necessary that they should be endowed with strong passions; and the acquirement of such passions would naturally follow from the more eager leaving a larger number of offspring than the less eager.

The great eagerness of the males has thus indirectly led to their much more frequently developing secondary sexual characters than the females. But the development of such characters would be much aided if the males were more liable to vary than the females, as I concluded they were, after a long study of domesticated animals. Von Nathusius, who has had very wide experience, is strongly of the same opinion.² Good evidence also in favor of this conclusion can be produced by a comparison of the two sexes in mankind. During the Novara Expedition³ a vast number of measurements was made of various parts of the body in different races, and the men were found in almost every case to present a greater range of variation than the women; but I

¹ Professor Sachs (*Lehrbuch der Botanik*, 1870, Seite 633), in speaking of the male and female reproductive cells, remarks, "verhält sich die eine bei der Vereinigung activ, . . . die andere erscheint bei der Vereinigung passiv."

² *Vorträge über Viehzucht*, 1872, p. 63.

³ *Reise der Novara: "Anthropolog. Theil,"* 1867, Seite 216-269. The results were calculated by Dr. Weisbach from measurements made by Drs. K. Scherzer and Schwarz. On the greater variability of the males of domesticated animals, see *my Variation of Animals and Plants under Domestication*, 1868, Vol. II, p. 75.

shall have to recur to this subject in a future chapter. Mr. J. Wood,¹ who has carefully attended to the variation of the muscles in man, puts in italics the conclusion that "the greatest number of abnormalities in each subject is found in the males." He had previously remarked that "altogether in 102 subjects the varieties of redundancy were found to be half as many again as in females, contrasting widely with the greater frequency of deficiency in females before described." Professor Macalister likewise remarks² that variations in the muscles "are probably more common in males than females." Certain muscles which are not normally present in mankind are also more frequently developed in the male than in the female sex, although exceptions to this rule are said to occur. Dr. Burt Wilder³ has tabulated the cases of 152 individuals with supernumerary digits, of which 86 were males, and 39, or less than half, females, the remaining 27 being of unknown sex. It should not, however, be overlooked that women would more frequently endeavor to conceal a deformity of this kind than men. Again, Dr. L. Meyer asserts that the ears of man are more variable in form than those of woman.⁴ Lastly, the temperature is more variable in man than in woman.⁵

The cause of the greater general variability in the male sex than in the female is unknown, except in so far as secondary sexual characters are extraordinarily variable, and are usually confined to the males; and, as we shall presently see, this fact is, to a certain extent, intelligible. Through the action of sexual and natural selection male animals have been rendered in very many instances widely different from their females; but independently of selection the two sexes, from differing constitutionally, tend to vary in a somewhat different manner. The female has to expend much organic matter in the formation of her ova, whereas the male expends much force in fierce contests with his rivals, in

¹ *Proceedings Royal Society*, July, 1868, Vol. XVI, pp. 519, 524.

² *Proceedings Royal Irish Academy*, 1868, Vol. X, p. 123.

³ *Massachusetts Medical Society*, 1868, Vol. II, No. 3, p. 9.

⁴ *Archiv für Path., Anat. und Phys.*, 1871, p. 488.

⁵ The conclusions recently arrived at by Dr. J. Stockton Hough, on the temperature of man, are given in the *Popular Science Review*, January 1, 1874, p. 97.

wandering about in search of the female, in exerting his voice, pouring out odoriferous secretions, etc.; and this expenditure is generally concentrated within a short period. The great vigor of the male during the season of love seems often to intensify his colors, independently of any marked difference from the female.¹ In mankind, and even as low down in the organic scale as in the Lepidoptera, the temperature of the body is higher in the male than in the female, accompanied in the case of man by a slower pulse.² On the whole, the expenditure of matter and force by the two sexes is probably nearly equal, though effected in very different ways and at different rates.

From the causes just specified the two sexes can hardly fail to differ somewhat in constitution, at least during the breeding season; and although they may be subjected to exactly the same conditions, they will tend to vary in a different manner. If such variations are of no service to either sex, they will not be accumulated and increased by sexual or natural selection. Nevertheless, they may become permanent if the exciting cause acts permanently; and in accordance with a frequent form of inheritance they may be transmitted to that sex alone in which they first appeared. In this case the two sexes will come to present permanent, yet unimportant, differences of character. For instance, Mr. Allen shows that with a large number of birds inhabiting the northern and southern United States, the specimens from the south are darker colored than those from the north; and this seems to be the direct result of the difference in temperature, light, etc., between the two regions. Now, in some few cases, the two sexes of the same species appear to have been differently affected: in the *Ageloeus phoeniceus* the males have had their colors greatly intensified in the south; whereas with *Cardinalis virginianus* it

¹ Professor Mantegazza is inclined to believe ("Lettera a Carlo Darwin," *Archivio per l'Antropologia*, 1871, p. 306) that the bright colors, common in so many male animals, are due to the presence and retention by them of the spermatie fluid; but this can hardly be the case, for many male birds, for instance young pheasants, become brightly colored in the autumn of their first year.

² For mankind, see Dr. J. Stockton Hough, whose conclusions are given in the *Popular Science Review*, 1874, p. 97. See Girard's observations on the Lepidoptera, as given in the *Zoological Record*, 1869, p. 347.

is the females which have been thus affected; with *Quiscalus major* the females have been rendered extremely variable in tint, while the males remain nearly uniform.¹

A few exceptional cases occur in various classes of animals, in which the females instead of the males have acquired well-pronounced secondary sexual characters, such as brighter colors, greater size, strength, or pugnacity. With birds there has sometimes been a complete transposition of the ordinary characters proper to each sex, the females having become the more eager in courtship, the males remaining comparatively passive, but apparently selecting the more attractive females, as we may infer from the results. Certain hen birds have thus been rendered more highly colored or otherwise ornamented as well as more powerful and pugnacious than the cocks, these characters being transmitted to the female offspring alone.

It may be suggested that in some cases a double process of selection has been carried on: that the males have selected the more attractive females, and the latter the more attractive males. This process, however, though it might lead to the modification of both sexes, would not make the one sex different from the other, unless indeed their tastes for the beautiful differed; but this is a supposition too improbable to be worth considering in the case of any animal, excepting man. There are, however, many animals in which the sexes resemble each other, both being furnished with the same ornaments, which analogy would lead us to attribute to the agency of sexual selection. In such cases it may be suggested with more plausibility that there has been a double or mutual process of sexual selection; the more vigorous and precocious females selecting the more attractive and vigorous males, the latter rejecting all except the more attractive females. But from what we know of the habits of animals, this view is hardly probable, for the male is generally eager to pair with any female. It is more probable that the ornaments common to both sexes were acquired by one sex, generally the male, and then transmitted to the offspring of both sexes. If, indeed, during a

¹ "Mammals and Winter Birds of E. Florida," *Bull. Comp. Zoölogy* (Harvard College), pp. 234, 280, 295.

lengthened period the males of any species were greatly to exceed the females in number, and then during another lengthened period, but under different conditions, the reverse were to occur, a double but not simultaneous process of sexual selection might easily be carried on, by which the two sexes might be rendered widely different.

We shall hereafter see that many animals exist, of which neither sex is brilliantly colored or provided with special ornaments, and yet the members of both sexes or of one alone have probably acquired simple colors, such as white or black, through sexual selection. The absence of bright tints or other ornaments may be the result of variations of the right kind never having occurred, or of the animals themselves having preferred plain black or white. Obscure tints have often been developed through natural selection for the sake of protection, and the acquirements through sexual selection of conspicuous colors appears to have been sometimes checked from the danger thus incurred. But in other cases the males during long ages may have struggled together for the possession of the females, and yet no effect will have been produced, unless a larger number of offspring were left by the more successful males to inherit their superiority than by the less successful; and this, as previously shown, depends on many complex contingencies.

Sexual selection acts in a less rigorous manner than natural selection. The latter produces its effects by the life or death at all ages of the more or less successful individuals. Death, indeed, not rarely ensues from the conflicts of rival males. But generally the less successful male merely fails to obtain a female, or obtains a retarded and less vigorous female later in the season, or, if polygamous, obtains fewer females; so that they leave fewer, less vigorous, or no offspring. In regard to structures acquired through ordinary or natural selection, there is in most cases, as long as the conditions of life remain the same, a limit to the amount of advantageous modification in relation to certain special purposes; but in regard to structures adapted to make one male victorious over another, either in fighting, or in charming the female, there is no definite limit to the amount of advantageous

modification ; so that as long as the proper variations arise the work of sexual selection will go on. This circumstance may partly account for the frequent and extraordinary amount of variability presented by secondary sexual characters. Nevertheless, natural selection will determine that such characters shall not be acquired by the victorious males if they would be highly injurious, either by expending too much of their vital powers, or by exposing them to any great danger. The development, however, of certain structures — of the horns, for instance, in certain stags — has been carried to a wonderful extreme ; and in some cases to an extreme which, as far as the general conditions of life are concerned, must be slightly injurious to the male. From this fact we learn that the advantages which favored males derive from conquering other males in battle or courtship, and thus leaving a numerous progeny, are in the long run greater than those derived from rather more perfect adaptation to their conditions of life. We shall further see that the power to charm the female has sometimes been more important than the power to conquer other males in battle.

LAWS OF INHERITANCE

In order to understand how sexual selection has acted on many animals of many classes, and in the course of ages has produced a conspicuous result, it is necessary to bear in mind the laws of inheritance, as far as they are known. Two distinct elements are included under the term "inheritance," — the transmission, and the development of characters ; but as these generally go together, the distinction is often overlooked. We see this distinction in those characters which are transmitted through the early years of life, but are developed only at maturity or during old age. We see the same distinction more clearly with secondary sexual characters, for these are transmitted through both sexes, though developed in one alone. That they are present in both sexes is manifest when two species, having strongly marked sexual characters, are crossed, for each transmits the characters proper to its own male and female sex to the hybrid offspring of

either sex. The same fact is likewise manifest, when characters proper to the male are occasionally developed in the female when she grows old or becomes diseased, as, for instance, when the common hen assumes the flowing tail feathers, hackles, comb, spurs, voice, and even pugnacity of the cock. Conversely, the same thing is evident, more or less plainly, with castrated males. Again, independently of old age or disease, characters are occasionally transferred from the male to the female, as when, in certain breeds of the fowl, spurs regularly appear in the young and healthy females. But in truth they are simply developed in the female, for in every breed each detail in the structure of the spur is transmitted through the female to her male offspring. Many cases will hereafter be given where the female exhibits, more or less perfectly, characters proper to the male, in whom they must have been first developed, and then transferred to the female. The converse case of the first development of characters in the female and of transference to the male is less frequent; it will therefore be well to give one striking instance. With bees the pollen-collecting apparatus is used by the female alone for gathering pollen for the larvæ, yet in most of the species it is partially developed in the males, to whom it is quite useless, and it is perfectly developed in the males of *Bombus* or the humble-bee.¹ As not a single other Hymenopterous insect, not even the wasp, which is closely allied to the bee, is provided with a pollen-collecting apparatus, we have no grounds for supposing that male bees primordially collected pollen as well as the females; although we have some reason to suspect that male mammals primordially suckled their young as well as the females. Lastly, in all cases of reversion, characters are transmitted through two, three, or many more generations, and are then developed under certain unknown favorable conditions. This important distinction between transmission and development will be best kept in mind by the aid of the hypothesis of pangenesis. According to this hypothesis, every unit or cell of the body throws off gemmules or undeveloped atoms, which are transmitted to the offspring of both

¹ Hermann Müller, "Anwendung der Darwin'schen Lehre auf Bienen," *Verhandlungen des naturhistorischen Vereins*, Jahrgang XXIX, p. 42.

sexes, and are multiplied by self-division. They may remain undeveloped during the early years of life or during successive generations; and their development into units or cells, like those from which they were derived, depends on their affinity for, and union with, other units or cells previously developed in the due order of growth.

Inheritance at Corresponding Periods of Life

This tendency is well established. A new character, appearing in a young animal, whether it lasts throughout life or is only transient, will, in general, reappear in the offspring at the same age and last for the same time. If, on the other hand, a new character appears at maturity, or even during old age, it tends to reappear in the offspring at the same advanced age. When deviations from this rule occur the transmitted characters much oftener appear before than after the corresponding age. As I have dwelt on this subject sufficiently in another work,¹ I will here merely give two or three instances, for the sake of recalling the subject to the reader's mind. In several breeds of the fowl, the down-covered chickens, the young birds in their first true plumage, and the adults differ greatly from one another, as well as from their common parent form, the *Gallus bankiva*; and these characters are faithfully transmitted by each breed to their offspring at the corresponding periods of life. For instance, the chickens of spangled Hamburgs, while covered with down, have a few dark spots on the head and rump, but are not striped longitudinally, as in many other breeds; in their first true plumage "they are beautifully penciled," that is, each feather is transversely marked by numerous dark bars; but in their second plumage the feathers all become spangled or tipped with a dark round spot.² Hence in this breed variations have occurred at,

¹ The Variation of Animals and Plants under Domestication, 1868, Vol. II, p. 75. In the last chapter but one, the provisional hypothesis of pangensis, above alluded to, is fully explained.

² These facts are given on the high authority of a great breeder, Mr. Teebay. See Tegetmeier's Poultry Book, 1868, p. 158. On the characters of chickens of different breeds, and on the breeds of the pigeon, alluded to in the following paragraph, see Variation of Animals, etc., Vol. I, pp. 160, 249; Vol. II, p. 77.

and been transmitted to, three distinct periods of life. The pigeon offers a more remarkable case, because the aboriginal parent species does not undergo any change of plumage with advancing age, excepting that at maturity the breast becomes more iridescent; yet there are breeds which do not acquire their characteristic colors until they have molted two, three, or four times, and these modifications of plumage are regularly transmitted.

Inheritance at Corresponding Seasons of the Year

With animals in a state of nature, innumerable instances occur of characters appearing periodically at different seasons. We see this in the horns of the stag, and in the fur of arctic animals, which becomes thick and white during the winter. Many birds acquire bright colors and other decorations during the breeding season alone. Pallas states¹ that in Siberia domestic cattle and horses become lighter colored during the winter; and I have myself observed and heard of similar strongly marked changes of color, that is, from brownish cream color or reddish brown to a perfect white, in several ponies in England. Although I do not know that this tendency to change the color of the coat during different seasons is transmitted, yet it probably is so, as all shades of color are strongly inherited by the horse. Nor is this form of inheritance, as limited by the seasons, more remarkable than its limitation by age or sex.

Inheritance as limited by Sex

The equal transmission of characters to both sexes is the commonest form of inheritance, at least with those animals which do not present strongly marked sexual differences, and indeed with many of these. But characters are somewhat commonly transferred exclusively to that sex in which they first appear. Ample evidence on this head has been advanced in my work on Variation under Domestication, but a few instances may here be

¹ *Novae species Quadrupedum e Glirium ordine*, 1778, p. 7. On the transmission of color by the horse, see *Variation of Animals, etc.*, under Domestication, Vol. I, p. 51. Also Vol. II, p. 71, for a general discussion on "Inheritance as limited by Sex."

given. There are breeds of the sheep and goat in which the horns of the male differ greatly in shape from those of the female ; and these differences, acquired under domestication, are regularly transmitted to the same sex. As a rule, it is the females alone in cats which are tortoise shell, the corresponding color in the males being rusty red. With most breeds of the fowl the characters proper to each sex are transmitted to the same sex alone. So general is this form of transmission that it is an anomaly when variations in certain breeds are transmitted equally to both sexes. There are also certain subbreeds of the fowl in which the males can hardly be distinguished from one another, while the females differ considerably in color. The sexes of the pigeon in the parent species do not differ in any external character ; nevertheless, in certain domesticated breeds the male is colored differently from the female.¹ The wattle in the English carrier pigeon and the crop in the pouter are more highly developed in the male than in the female ; and although these characters have been gained through long-continued selection by man, the slight differences between the sexes are wholly due to the form of inheritance which has prevailed ; for they have arisen not from, but rather in opposition to, the wish of the breeder.

Most of our domestic races have been formed by the accumulation of many slight variations ; and as some of the successive steps have been transmitted to one sex alone, and some to both sexes, we find in the different breeds of the same species all gradations between great sexual dissimilarity and complete similarity. Instances have already been given of the breeds of the fowl and pigeon, and under nature analogous cases are common. With animals under domestication, but whether in nature I will not venture to say, one sex may lose characters proper to it, and may thus come somewhat to resemble the opposite sex ; for instance, the males of some breeds of the fowl have lost their masculine tail plumes and hackles. On the other hand, the differences between the sexes may be increased under domestication,

¹ Dr. Chapuis, *Le Pigeon Voyageur Belge*, 1865, p. 87. Boitard et Corbé, *Les Pigeons de Volière*, etc., 1824, p. 173. See also, on similar differences in certain breeds at Modena, *Le variazioni dei Colombi domestici*, del Paolo Bonizzi, 1873.

as with merino sheep, in which the ewes have lost their horns. Again, characters proper to one sex may suddenly appear in the other sex, as in those subbreeds of the fowl in which the hens acquire spurs while young, or as in certain Polish subbreeds, in which the females, as there is reason to believe, originally acquired a crest, and subsequently transferred it to the males. All these cases are intelligible on the hypothesis of pangenesis; for they depend on the gemmules of certain parts, although present in both sexes, becoming, through the influence of domestication, either dormant or developed in either sex.

There is one difficult question which it will be convenient to defer to a future chapter; namely, whether a character at first developed in both sexes could through selection be limited in its development to one sex alone. If, for instance, a breeder observed that some of his pigeons (of which the characters are usually transferred in an equal degree to both sexes) varied into pale blue, could he by long-continued selection make a breed in which the males alone should be of this tint, while the females remained unchanged? I will here only say, that this, though perhaps not impossible, would be extremely difficult; for the natural result of breeding from the pale blue males would be to change the whole stock of both sexes to this tint. If, however, variations of the desired tint appeared, which were from the first limited in their development to the male sex, there would not be the least difficulty in making a breed with the two sexes of a different color, as indeed has been effected with a Belgian breed, in which the males alone are streaked with black. In a similar manner, if any variation appeared in a female pigeon, which was from the first sexually limited in its development to the females, it would be easy to make a breed with the females alone thus characterized; but if the variation was not thus originally limited, the process would be extremely difficult, perhaps impossible.¹

¹ Since the publication of the first edition of this work it has been highly satisfactory to me to find the following remarks (*The Field*, September, 1872) from so experienced a breeder as Mr. Tegetmeier. After describing some curious cases in pigeons, of the transmission of color by one sex alone, and the formation of a subbreed with this character, he says: "It is a singular circumstance that Mr. Darwin should have suggested the possibility of modifying the sexual colors of

On the Relation between the Period of Development of a Character and its Transmission to One Sex or to Both Sexes

Why certain characters should be inherited by both sexes, and other characters by one sex alone, namely, by that sex in which the character first appeared, is in most cases quite unknown. We cannot even conjecture why with certain subbreeds of the pigeon, black stræ, though transmitted through the female, should be developed in the male alone, while every other character is equally transferred to both sexes; why, again, with cats, the tortoise-shell color should, with rare exceptions, be developed in the female alone. The very same character, such as deficient or supernumerary digits, color-blindness, etc., may with mankind be inherited by the males alone of one family, and in another family by the females alone, though in both cases transmitted through the opposite as well as through the same sex.¹ Although we are thus ignorant, the two following rules seem often to hold good, — that variations which first appear in either sex at a late period of life tend to be developed in the same sex alone, while variations which first appear early in life in either sex tend to be developed in both sexes. I am, however, far from supposing that this is the sole determining cause. As I have not elsewhere discussed this subject, and as it has an important bearing on sexual selection, I must here enter into lengthy and somewhat intricate details.

It is in itself probable that any character appearing at an early age would tend to be inherited equally by both sexes, for the sexes do not differ much in constitution before the power of reproduction is gained. On the other hand, after this power has been gained and the sexes have come to differ in constitution, the gemmules (if I may again use the language of pangenesis) which are cast off from each varying part in the one sex would be much more likely to possess the proper affinities for uniting

birds by a course of artificial selection. When he did so he was in ignorance of these facts that I have related; but it is remarkable how very closely he suggested the right method of procedure."

¹ References are given in my *Variation of Animals and Plants under Domestication*, Vol. II, p. 72.

with the tissues of the same sex, and thus becoming developed, than with those of the opposite sex.

I was first led to infer that a relation of this kind exists, from the fact that whenever and in whatever manner the adult male differs from the adult female, he differs in the same manner from the young of both sexes. The generality of this fact is quite remarkable; it holds good with almost all mammals, birds, amphibians, and fishes; also with many crustaceans, spiders, and some few insects, such as certain Orthoptera and Libellulæ. In all these cases the variations, through the accumulation of which the male acquired his proper masculine characters, must have occurred at a somewhat late period of life, otherwise the young males would have been similarly characterized; and conformably with our rule, the variations are transmitted to and developed in the adult males alone. When, on the other hand, the adult male closely resembles the young of both sexes (these, with rare exceptions, being alike), he generally resembles the adult female; and in most of these cases the variations through which the young and old acquired their present characters probably occurred, according to our rule, during youth. But there is here room for doubt, for characters are sometimes transferred to the offspring at an earlier age than that at which they first appeared in the parents, so that the parents may have varied when adult, and have transferred their characters to their offspring while young. There are, moreover, many animals in which the two sexes closely resemble each other, and yet both differ from their young; and here the characters of the adults must have been acquired late in life; nevertheless, these characters, in apparent contradiction to our rule, are transferred to both sexes. We must not, however, overlook the possibility or even probability of successive variations of the same nature occurring, under exposure to similar conditions, simultaneously in both sexes at a rather late period of life; and in this case the variations would be transferred to the offspring of both sexes at a corresponding late age; and there would then be no real contradiction to the rule that variations occurring late in life are transferred exclusively to the sex in which they first appeared. This latter rule seems to hold true

more generally than the second one, namely, that variations which occur in either sex early in life tend to be transferred to both sexes. As it was obviously impossible even to estimate in how large a number of cases throughout the animal kingdom these two propositions held good, it occurred to me to investigate some striking instances, and to rely on the result.

An excellent case for investigation is afforded by the deer family. In all the species but one, the horns are developed only in the males, though certainly transmitted through the females, and capable of abnormal development in them. In the reindeer, on the other hand, the female is provided with horns; so that in this species the horns ought, according to our rule, to appear early in life, long before the two sexes are mature and have come to differ much in constitution. In all the other species the horns ought to appear later in life, which would lead to their development in that sex alone in which they first appeared in the progenitor of the whole family. Now in seven species, belonging to distinct sections of the family and inhabiting different regions, in which the stags alone bear horns, I find that the horns first appear at periods varying from nine months after birth in the roebuck to ten, twelve, or even more months in the stags of the six other and larger species.¹ But with the reindeer the case is widely different; for as I hear from Professor Nilsson, who kindly made special inquiries for me in Lapland, the horns appear in the young animals within four or five weeks after birth, and at the same time in both sexes. So that here we have a structure, developed at a most unusually early age in one species of the family, and likewise common to both sexes in this one species alone.

In several kinds of antelopes only the males are provided with horns, while in the greater number both sexes bear horns. With

¹ I am much obliged to Mr. Cupples for having made inquiries for me in regard to the roebuck and red deer of Scotland from Mr. Robertson, the experienced head forester to the Marquis of Breadalbane. In regard to fallow deer, I have to thank Mr. Eyton and others for information. For the *Cervus alces* of North America, see Land and Water, 1868, pp. 221 and 254; for the *C. Virginianus* and *strongyloceros* of the same continent, see J. D. Caton, in *Ottawa Academy of Natural Science*, 1868, p. 13. For *Cervus Eldi* of Pegu, see Lieutenant Beavan, *Proc. Zoolog. Soc.*, 1867, p. 762.

respect to the period of development, Mr. Blyth informs me that there was at one time in the Zoölogical Gardens a young koodoo (*Ant. strepsiceros*), of which the males alone are horned, and also the young of a closely allied species, the eland (*Ant. oreas*), in which both sexes are horned. Now it is in strict conformity with our rule that in the young male koodoo, although ten months old, the horns were remarkably small, considering the size ultimately attained by them; while in the young male eland, although only three months old, the horns were already very much larger than in the koodoo. It is also a noticeable fact that in the prong-horned antelope¹ only a few of the females, about one in five, have horns, and these are in a rudimentary state, though sometimes above four inches long; so that as far as concerns the possession of horns by the males alone, this species is in an intermediate condition, and the horns do not appear until about five or six months after birth. Therefore in comparison with what little we know of the development of the horns in other antelopes, and from what we do know with respect to the horns of deer, cattle, etc., those of the prong-horned antelope appear at an intermediate period of life, — that is, not very early, as in cattle and sheep, nor very late, as in the larger deer and antelopes. The horns of sheep, goats, and cattle, which are well developed in both sexes, though not quite equal in size, can be felt, or even seen, at birth or soon afterward.² Our rule, however, seems to fail in some breeds of sheep, for instance, merinos, in which the rams alone are horned; for I cannot find on inquiry,³ that the horns are developed later in life in this breed than in ordinary

¹ *Antilocapra Americana*. I have to thank Dr. Canfield for information with respect to the horns of the female. See also his paper in *Proc. Zoölog. Soc.*, 1866, p. 109; also Owen's *Anatomy of Vertebrates*, Vol. III, p. 627.

² I have been assured that the horns of the sheep in North Wales can always be felt, and are sometimes even an inch in length at birth. Youatt says (*Cattle*, 1834, p. 277) that the prominence of the frontal bone in cattle penetrates the cutis at birth, and that the horny matter is soon formed over it.

³ I am greatly indebted to Professor Victor Carus for having made inquiries for me, from the highest authorities, with respect to the merino sheep of Saxony. On the Guinea coast of Africa there is, however, a breed of sheep in which, as with merinos, the rams alone bear horns; and Mr. Winwood Reade informs me that in one case observed by him a young ram, born on February 10, first showed

sheep in which both sexes are horned. But with domesticated sheep the presence or absence of horns is not a firmly fixed character; for a certain proportion of the merino ewes bear small horns, and some of the rams are hornless; and in most breeds hornless ewes are occasionally produced.

Dr. W. Marshall has lately made a special study of the protuberances so common on the heads of birds,¹ and he comes to the following conclusion: that with those species in which they are confined to the males, they are developed late in life; whereas with those species in which they are common to the two sexes, they are developed at a very early period. This is certainly a striking confirmation of my two laws of inheritance.

In most of the species of the splendid family of the pheasants the males differ conspicuously from the females, and they acquire their ornaments at a rather late period of life. The eared pheasant (*Crossoptilon auritum*), however, offers a remarkable exception, for both sexes possess the fine caudal plumes, the large ear tufts, and the crimson velvet about the head; I find that all these characters appear very early in life in accordance with rule. The adult male can, however, be distinguished from the adult female by the presence of spurs; and conformably with our rule, these do not begin to be developed before the age of six months, as I am assured by Mr. Bartlett, and even at this age, the two sexes can hardly be distinguished.² The male and female peacock differ conspicuously from each other in almost every part of their plumage, except in the elegant head crest which is common to

horns on March 6, so that in this instance, in conformity with rule, the development of the horns occurred at a later period of life than in Welsh sheep, in which both sexes are horned.

¹ "Ueber die knöchernen Schädelhöcker der Vögel," in the *Niederländisches Archiv für Zoologie*, 1872, Band I, Heft 2.

² In the common peacock (*Pavo cristatus*) the male alone possesses spurs, while both sexes of the Java peacock (*P. muticus*) offer the unusual case of being furnished with spurs. Hence I fully expected that in the latter species they would have been developed earlier in life than in the common peacock; but M. Hegt of Amsterdam informs me, that with young birds of the previous year, of both species, compared on April 23, 1869, there was no difference in the development of the spurs. The spurs, however, were as yet represented merely by slight knobs or elevations. I presume that I should have been informed if any difference in the rate of development had been observed subsequently.

both sexes; and this is developed very early in life, long before the other ornaments which are confined to the male. The wild duck offers an analogous case, for the beautiful green speculum on the wings is common to both sexes, though duller and somewhat smaller in the female, and it is developed early in life, while the curled tail feathers and other ornaments of the male are developed later.¹ Between such extreme cases of close sexual resemblance and wide dissimilarity, as those of the Crossoptilon and peacock, many intermediate ones could be given, in which the characters follow our two rules in their order of development.

As most insects emerge from the pupal state in a mature condition, it is doubtful whether the period of development can determine the transference of their characters to one or to both sexes. But we do not know that the colored scales, for instance, in two species of butterflies, in one of which the sexes differ in color, while in the other they are alike, are developed at the same relative age in the cocoon. Nor do we know whether all the scales are simultaneously developed on the wings of the same species of butterfly in which certain colored marks are confined to one sex, while others are common to both sexes. A difference of this kind in the period of development is not so improbable as it may at first appear; for with the Orthoptera, which assume their adult state, not by a single metamorphosis, but by a succession of molts, the young males of some species at first resemble the females, and acquire their distinctive masculine characters only at a later molt. Strictly analogous cases occur at the successive molts of certain male crustaceans.

¹ In some other species of the duck family the speculum differs in a greater degree in the two sexes; but I have not been able to discover whether its full development occurs later in life in the males of such species than in the male of the common duck, as ought to be the case according to our rule. With the allied *Mergus cucullatus* we have, however, a case of this kind: the two sexes differ conspicuously in general plumage, and to a considerable degree in the speculum, which is pure white in the male and grayish white in the female. Now the young males at first entirely resemble the females, and have a grayish white speculum, which becomes pure white at an earlier age than that at which the adult male acquires his other and more strongly marked sexual differences. See Audubon, Ornithological Biography, 1835, Vol. III, pp. 249-250.

We have as yet considered the transference of characters, relatively to their period of development, only in species in a natural state; we will now turn to domesticated animals, and first touch on monstrosities and diseases. The presence of supernumerary digits, and the absence of certain phalanges, must be determined at an early embryonic period, — the tendency to profuse bleeding is at least congenital, as is probably color-blindness, — yet these peculiarities and other similar ones are often limited in their transmission to one sex; so that the rule that characters, developed at an early period, tend to be transmitted to both sexes here wholly fails. But this rule, as before remarked, does not appear to be nearly so general as the converse one, namely, that characters which appear late in life in one sex are transmitted exclusively to the same sex. From the fact of the above abnormal peculiarities becoming attached to one sex long before the sexual functions are active, we may infer that there must be some difference between the sexes at an extremely early age. With respect to sexually limited diseases, we know too little of the period at which they originate to draw any safe conclusion. Gout, however, seems to fall under our rule, for it is generally caused by intemperance during manhood, and is transmitted from the father to his sons in a much more marked manner than to his daughters.

In the various domestic breeds of sheep, goats, and cattle the males differ from their respective females in the shape or development of their horns, forehead, mane, dewlap, tail, and hump on the shoulders; and these peculiarities, in accordance with our rule, are not fully developed until a rather late period of life. The sexes of dogs do not differ, except that in certain breeds, especially in the Scotch deerhound, the male is much larger and heavier than the female; and, as we shall see in a future chapter, the male goes on increasing in size to an unusually late period of life, which, according to rule, will account for his increased size being transmitted to his male offspring alone. On the other hand, the tortoise-shell color, which is confined to female cats, is quite distinct at birth, and this case violates the rule. There is a breed of pigeons in which the males alone are streaked with black, and

the streaks can be detected even in the nestlings ; but they become more conspicuous at each successive molt, so that this case partly opposes and partly supports the rule. With the English carrier and pouter pigeons the full development of the wattle and the crop occurs rather late in life, and conformably with the rule, these characters are transmitted in full perfection to the males alone. The following cases perhaps come within the class previously alluded to, in which both sexes have varied in the same manner at a rather late period of life, and have consequently transferred their new characters to both sexes at a corresponding late period ; and if so, these cases are not opposed to our rule : there exist subbreeds of the pigeon, described by Neumeister,¹ in which both sexes change their color during two or three molts (as is likewise the case with the almond tumbler) ; nevertheless, these changes, though occurring rather late in life, are common to both sexes. One variety of the canary bird, namely, the London Prize, offers a nearly analogous case.

With the breeds of the fowl the inheritance of various characters by one or both sexes seems generally determined by the period at which such characters are developed. Thus in all the many breeds in which the adult male differs greatly in color from the female, as well as from the wild parent species, he differs also from the young male, so that the newly acquired characters must have appeared at a rather late period of life. On the other hand, in most of the breeds in which the two sexes resemble each other the young are colored in nearly the same manner as their parents, and this renders it probable that their colors first appeared early in life. We have instances of this fact in all black and white breeds, in which the young and old of both sexes are alike ; nor can it be maintained that there is something peculiar in a black or white plumage, which leads to its transference to both sexes ; for the males alone of many natural species are either black or white, the females being differently colored. With the so-called cuckoo subbreeds of the fowl, in which the feathers are transversely penciled with dark stripes, both sexes

¹ Das Ganze der Taubenzucht, 1837, Seite 21, 24. For the case of the streaked pigeons, see Dr. Chapuis, *Le Pigeon Voyageur Belge*, 1865, p. 87.

and the chickens are colored in nearly the same manner. The laced plumage of the Sebright bantam is the same in both sexes, and in the young chickens the wing feathers are distinctly though imperfectly laced. Spangled Hamburgs, however, offer a partial exception, for the two sexes, though not quite alike, resemble each other more closely than do the sexes of the aboriginal parent species; yet they acquire their characteristic plumage late in life, for the chickens are distinctly penciled. With respect to other characters besides color, in the wild parent species and in most of the domestic breeds, the males alone possess a well-developed comb; but in the young of the Spanish fowl it is largely developed at a very early age, and, in accordance with this early development in the male, it is of unusual size in the adult female. In the game breeds pugnacity is developed at a wonderfully early age, of which curious proofs could be given; and this character is transmitted to both sexes, so that the hens, from their extreme pugnacity, are now generally exhibited in separate pens. With the Polish breeds the bony protuberance of the skull which supports the crest is partially developed even before the chickens are hatched, and the crest itself soon begins to grow, though at first feebly;¹ and in this breed the adults, of both sexes are characterized by a great bony protuberance and an immense crest.

Finally, from what we have now seen of the relation which exists in many natural species and domesticated races between the period of the development of their characters and the manner of their transmission, — for example, the striking fact of the early growth of the horns in the reindeer, in which both sexes bear horns, in comparison with their much later growth in the other species, in which the male alone bears horns, — we may conclude that one though not the sole cause of characters being exclusively inherited by one sex is their development at a late age. And secondly, that one, though apparently a less efficient, cause of

¹ For full particulars and references on all these points respecting the several breeds of the fowl, see *Variation of Animals and Plants under Domestication*, Vol. I, pp. 250, 256. In regard to the higher animals, the sexual differences which have arisen under domestication are described in the same work under the head of each species.

characters being inherited by both sexes is their development at an early age, while the sexes differ but little in constitution. It appears, however, that some difference must exist between the sexes, even during a very early embryonic period, for characters developed at this age not rarely become attached to one sex.

Summary and Concluding Remarks

From the foregoing discussion on the various laws of inheritance we learn that the characters of the parents often, or even generally, tend to become developed in the offspring of the same sex, at the same age, and periodically at the same season of the year in which they first appeared in the parents. But these rules, owing to unknown causes, are far from being fixed. Hence during the modification of a species the successive changes may readily be transmitted in different ways: some to one sex, and some to both; some to the offspring at one age, and some to the offspring at all ages. Not only are the laws of inheritance extremely complex, but so are the causes which induce and govern variability. The variations thus induced are preserved and accumulated by sexual selection, which is in itself an extremely complex affair, depending, as it does, on the ardor in love, the courage, and the rivalry of the males, as well as on the powers of perception, the taste, and will of the female. Sexual selection will also be largely dominated by natural selection tending toward the general welfare of the species. Hence the manner in which the individuals of either or both sexes have been affected through sexual selection cannot fail to be complex in the highest degree.

When variations occur late in life in one sex and are transmitted to the same sex at the same age, the other sex and the young are left unmodified. When they occur late in life, but are transmitted to both sexes at the same age, the young alone are left unmodified. Variations, however, may occur at any period of life in one sex or in both, and be transmitted to both sexes at all ages, and then all the individuals of the species are similarly modified. In the following chapters it will be seen that all these cases frequently occur in nature.

Sexual selection can never act on any animal before the age for reproduction arrives. From the great eagerness of the male it has generally acted on this sex and not on the females. The males have thus become provided with weapons for fighting with their rivals, with organs for discovering and securely holding the female, and for exciting or charming her. When the sexes differ in these respects it is also, as we have seen, an extremely general law that the adult male differs more or less from the young male; and we may conclude from this fact that the successive variations by which the adult male became modified did not generally occur much before the age for reproduction. Whenever some or many of the variations occurred early in life the young males would partake more or less of the characters of the adult males; and differences of this kind between the old and young males may be observed in many species of animals.

It is probable that young male animals have often tended to vary in a manner which would not only have been of no use to them at an early age, but would have been actually injurious, as by acquiring bright colors, which would render them conspicuous to their enemies, or by acquiring structures, such as great horns, which would expend much vital force in their development. Variations of this kind occurring in the young males would almost certainly be eliminated through natural selection. With the adult and experienced males, on the other hand, the advantages derived from the acquisition of such characters would more than counterbalance some exposure to danger, and some loss of vital force.

As variations which give to the male a better chance of conquering other males, or of finding, securing, or charming the opposite sex, would, if they happened to arise in the female, be of no service to her, they would not be preserved in her through sexual selection. We have also good evidence with domesticated animals that variations of all kinds are, if not carefully selected, soon lost through intercrossing and accidental deaths. Consequently in a state of nature, if variations of the above kind chanced to arise in the female line and to be transmitted exclusively in this line, they would be extremely liable to be lost. If, however, the females varied and transmitted their newly acquired

characters to their offspring of both sexes, the characters which were advantageous to the males would be preserved by them through sexual selection, and the two sexes would in consequence be modified in the same manner, although such characters were of no use to the females; but I shall hereafter have to recur to these more intricate contingencies. Lastly, the females may acquire, and apparently have often acquired by transference, characters from the male sex.

As variations occurring late in life and transmitted to one sex alone have incessantly been taken advantage of and accumulated through sexual selection in relation to the reproduction of the species, therefore it appears, at first sight, an unaccountable fact that similar variations have not frequently been accumulated through natural selection, in relation to the ordinary habits of life. If this had occurred, the two sexes would often have been differently modified, for the sake, for instance, of capturing prey or of escaping from danger. Differences of this kind between the two sexes do occasionally occur, especially in the lower classes. But this implies that the two sexes follow different habits in their struggles for existence, which is a rare circumstance with the higher animals. The case, however, is widely different with the reproductive functions, in which respect the sexes necessarily differ. For variations in structure which are related to these functions have often proved of value to one sex, and from having arisen at a late period of life have been transmitted to one sex alone; and such variations, thus preserved and transmitted, have given rise to secondary sexual characters.

In the following chapters I shall treat of the secondary sexual characters in animals of all classes. The lowest classes will detain us for a very short time, but the higher animals, especially birds, must be treated at considerable length. I intend to give only a few illustrative instances of the innumerable structures by the aid of which the male finds the female, or, when found, holds her. On the other hand, all structures and instincts by the aid of which the male conquers other males, and by which he allures or excites the female, will be fully discussed, as these are in many ways the most interesting.

SECONDARY SEXUAL CHARACTERS OF MAN

With mankind the differences between the sexes are greater than in most of the Quadrumana, but not so great as in some, for instance, the mandrill. Man on an average is considerably taller, heavier, and stronger than woman, with squarer shoulders and more plainly pronounced muscles. Owing to the relation which exists between muscular development and the projection of the brows,¹ the superciliary ridge is generally more marked in man than in woman. His body, and especially his face, is more hairy, and his voice has a different and more powerful tone. In certain races the women are said to differ slightly in tint from the men. For instance, Schweinfurth, in speaking of a negress belonging to the Mombuttus, who inhabit the interior of Africa, a few degrees north of the equator, says, "Like all her race, she had a skin several shades lighter than her husband's, being something of the color of half-roasted coffee."² As the women labor in the fields and are quite unclothed, it is not likely that they differ in color from the men owing to less exposure to the weather. European women are perhaps the brighter colored of the two sexes, as may be seen when both have been equally exposed.

Man is more courageous, pugnacious, and energetic than woman, and has a more inventive genius. His brain is absolutely larger, but whether or not proportionately to his larger body has not, I believe, been fully ascertained. In woman the face is rounder; the jaws and the base of the skull smaller; the outlines of the body rounder, in parts more prominent; and her pelvis is broader than in man;³ but this latter character may perhaps be considered rather as a primary than a secondary sexual character. She comes to maturity at an earlier age than man.

¹ Schaaffhausen, translation in *Anthropological Review*, October, 1868, pp. 419, 420, 427.

² *The Heart of Africa*, English translation, 1873, Vol. I, p. 544.

³ Ecker, translation in *Anthropological Review*, October, 1868, pp. 351-356. The comparison of the form of the skull in men and women has been followed out with much care by Welcker.

As with animals of all classes, so with man, the distinctive characters of the male sex are not fully developed until he is nearly mature; and if emasculated they never appear. The beard, for instance, is a secondary sexual character, and male children are beardless, though at an early age they have abundant hair on the head. It is probably due to the rather late appearance in life of the successive variations whereby man has acquired his masculine characters that they are transmitted to the male sex alone. Male and female children resemble each other closely, like the young of so many other animals in which the adult sexes differ widely; they likewise resemble the mature female much more closely than the mature male. The female, however, ultimately assumes certain distinctive characters, and in the formation of her skull is said to be intermediate between the child and the man.¹ Again, as the young of closely allied though distinct species do not differ nearly so much from each other as do the adults, so it is with the children of the different races of man. Some have even maintained that race differences cannot be detected in the infantile skull.² In regard to color, the newborn negro child is reddish nut-brown, which soon becomes slaty gray, the black color being fully developed within a year in the Sudan, but not until three years in Egypt. The eyes of the negro are at first blue, and the hair chestnut brown rather than black, being curled only at the ends. The children of the Australians immediately after birth are yellowish brown, and become dark at a later age. Those of the Guaranys of Paraguay are whitish yellow, but they acquire in the course of a few weeks the yellowish brown tint of their parents. Similar observations have been made in other parts of America.³

¹ Ecker and Welcker, translation in *Anthropological Review*, October, 1863, pp. 352, 355; Vogt, *Lectures on Man*, English translation, p. 81.

² Schaaffhausen, *Anthropological Review*, October, 1868, p. 429.

³ Pruner-Bey, on negro infants; as quoted by Vogt, *Lectures on Man*, English translation, 1864, p. 189; for further facts on negro infants, as quoted from Winterbottom and Camper, see Lawrence, *Lectures on Physiology*, etc., 1822, p. 451. For the infants of the Guaranys, see Rengger, *Säugethiere*, etc., s. 3. See also Godron, *De l'Espèce*, 1859, Tome II, p. 253. For the Australians, Waitz, *Introduction to Anthropology*, English translation, 1863, p. 99.

I have specified the foregoing differences between the male and female sex in mankind because they are curiously like those of the *Quadrumanus*. With these animals the female is mature at an earlier age than the male; at least this is certainly the case in the *Cebus asaræ*.¹ The males of most species are larger and stronger than the females, of which fact the gorilla affords a well-known instance. Even in so trifling a character as the greater prominence of the superciliary ridge, the males of certain monkeys differ from the females, and agree in this respect with mankind. In the gorilla and certain other monkeys the cranium of the adult male presents a strongly marked sagittal crest, which is absent in the female;² and Ecker found a trace of a similar difference between the two sexes in the *Australians*.³ With monkeys when there is any difference in the voice, that of the male is the more powerful. We have seen that certain male monkeys have a well-developed beard, which is quite deficient, or much less developed, in the female. No instance is known of the beard, whiskers, or mustache being larger in the female than in the male monkey. Even in the color of the beard there is a curious parallelism between man and the *Quadrumanus*, for with man when the beard differs in color from the hair of the head, as is commonly the case, it is, I believe, almost always of a lighter tint, being often reddish. I have repeatedly observed this fact in England; but two gentlemen have lately written to me, saying that they form an exception to the rule. One of these gentlemen accounts for the fact by the wide difference in color of the hair on the paternal and maternal sides of his family. Both had been long aware of this peculiarity (one of them having often been accused of dyeing his beard) and had been thus led to observe other men, and were convinced that the exceptions were very rare. Dr. Hooker attended to this little point for me in Russia, and found no exception to the rule. In Calcutta Mr. J. Scott, of the Botanic

¹ Rengger, *Säugethiere*, etc., 1830, s. 49.

² As in *Macacus cynomolgus* (Desmarest, *Mammalogie*, p. 65), and in *Hylobates agilis* (Geoffroy St.-Hilaire and F. Cuvier, *Hist. Nat. des Mamm.*, 1824, Tome I, p. 2).

³ *Anthropological Review*, October, 1868, p. 353.

Gardens, was so kind as to observe the many races of men to be seen there, as well as in some other parts of India, namely, two races in Sikhim, the Bhoteas, Hindus, Burmese, and Chinese, most of which races have very little hair on the face, and he always found that when there was any difference in color between the hair of the head and the beard, the latter was invariably lighter. Now with monkeys, as has already been stated, the beard frequently differs strikingly in color from the hair of the head, and in such cases it is always of a lighter hue, being often pure white, sometimes yellow or reddish.¹

In regard to the general hairiness of the body, the women in all races are less hairy than the men, and in some few *Quadrumana* the under side of the body of the female is less hairy than that of the male.² Lastly, male monkeys, like men, are bolder and fiercer than the females. They lead the troop, and when there is danger come to the front. We thus see how close is the parallelism between the sexual differences of man and the *Quadrumana*. With some few species, however, as with certain baboons, the orang, and the gorilla, there is a considerably greater difference between the sexes, as in the size of the canine teeth, in the development and color of the hair, and especially in the color of the naked parts of the skin, than in mankind.

All the secondary sexual characters of man are highly variable, even within the limits of the same race; and they differ much in the several races. These two rules hold good generally throughout the animal kingdom. In the excellent observations made on

¹ Mr. Blyth informs me that he has only seen one instance of the beard, whiskers, etc., in a monkey becoming white with old age, as is so commonly the case with us. This, however, occurred in an aged *Macacus cynomolgus*, kept in confinement, whose mustaches were "remarkably long and humanlike." Altogether this old monkey presented a ludicrous resemblance to one of the reigning monarchs of Europe, after whom he was universally nicknamed. In certain races of man the hair on the head hardly ever becomes gray; thus Mr. D. Forbes has never, as he informs me, seen an instance with the Aymaras and Quichuas of South America.

² This is the case with the females of several species of *Hylobates*; see Geoffroy St.-Hilaire and F. Cuvier, *Hist. Nat. des Mamm.*, Tome I. See also on *H. lar*, Penny Cyclopaedia, Vol. II, pp. 149, 150.

board the *Novara*,¹ the male Australians were found to exceed the females by only sixty-five millimeters in height, while with the Javans the average excess was two hundred and eighteen millimeters; so that in this latter race the difference in height between the sexes is more than thrice as great as with the Australians. Numerous measurements were carefully made of the stature, the circumference of the neck and chest, the length of the backbone and of the arms in various races, and nearly all these measurements show that the males differ much more from one another than do the females. This fact indicates that, as far as these characters are concerned, it is the male which has been chiefly modified, since the several races diverged from their common stock.

The development of the beard and the hairiness of the body differ remarkably in the men of distinct races, and even in different tribes or families of the same race. We Europeans see this among ourselves. In the Island of St. Kilda, according to Martin,² the men do not acquire beards until the age of thirty or upward, and even then the beards are very thin. On the Euræo-Asiatic continent beards prevail until we pass beyond India, though with the natives of Ceylon they are often absent, as was noticed in ancient times by Diodorus.³ Eastward of India beards disappear, as with the Siamese, Malays, Kalmucks, Chinese, and Japanese; nevertheless the Ainos,⁴ who inhabit the northernmost islands of the Japan Archipelago, are the hairiest men in the world. With negroes the beard is scanty or wanting, and they rarely have whiskers; in both sexes the body is frequently almost destitute of fine down.⁵ On the other hand, the Papuans of the Malay Archipelago, who are nearly as black as negroes, possess

¹ The results were deduced by Dr. Weisbach from the measurements made by Drs. K. Scherzer and Schwarz. See *Reise der Novara: "Anthropolog. Theil,"* 1867, ss. 216, 231, 234, 236, 239, 269.

² *Voyage to St. Kilda*, 3d ed., 1753, p. 37.

³ Sir J. E. Tennent, *Ceylon*, 1859, Vol. II, p. 107.

⁴ Quatrefages, *Revue des Cours Scientifiques*, August 29, 1868, p. 630; Vogt, *Lectures on Man*, English translation, p. 127.

⁵ On the beards of negroes, see Vogt, *Lectures*, etc., p. 127. Waitz, *Introduction to Anthropology*, English translation, 1863, Vol. I, p. 96. It is remarkable that in the United States (*Investigations in Military and Anthropological Statistics of*

well-developed beards. In the Pacific Ocean the inhabitants of the Fiji Archipelago have large bushy beards, while those of the not distant archipelagoes of Tonga and Samoa are beardless; but these men belong to distinct races. In the Ellice group all the inhabitants belong to the same race; yet on one island alone, namely, Nunemaya, "the men have splendid beards," while on the other islands "they have, as a rule, a dozen straggling hairs for a beard."¹

Throughout the great American continent the men may be said to be beardless; but in almost all the tribes a few short hairs are apt to be on the face, especially in old age. With the tribes of North America, Catlin estimates that eighteen out of twenty men are completely destitute by nature of a beard; but occasionally there may be seen a man, who has neglected to pluck out the hairs at puberty, with a soft beard an inch or two in length. The Guaranyes of Paraguay differ from all the surrounding tribes in having a small beard, and even some hair on the body, but no whiskers.² I am informed by Mr. D. Forbes, who particularly attended to this point, that the Aymaras and Quichuas of the Cordillera are remarkably hairless, yet in old age a few straggling hairs occasionally appear on the chin. The men of these two tribes have very little hair on the various parts of the body where hair grows abundantly in Europeans, and the women have none on the corresponding parts. The hair on the head, however, attains an extraordinary length in both sexes, often reaching almost to the ground; and this is likewise the case with some of the North American tribes. In the amount of hair and in the general shape of the body the sexes of the American aborigines do not differ so much from each other as in most other races.³ This fact is analogous with what occurs with some

American Soldiers, 1869, p. 569) the pure negroes and their crossed offspring seem to have bodies almost as hairy as Europeans.

¹ Dr. J. Barnard Davis, "On Oceanic Races," in *Anthropological Review*, April, 1870, pp. 185, 191.

² Catlin, *North American Indians*, 3d ed., 1842, Vol. II, p. 227. On the Guaranyes, see Azara, *Voyages dans l'Amérique Mérid.*, 1809, Tome II, p. 58; also Rengger, *Säugethiere von Paraguay*, s. 3.

³ Professor and Mrs. Agassiz (*Journey in Brazil*, p. 530) remark that the sexes of the American Indians differ less than those of the negroes and of the higher races. See also Rengger, *ibid.*, p. 3, on the Guaranyes.

closely allied monkeys ; thus the sexes of the chimpanzee are not as different as those of the orang or gorilla.¹

In the previous chapters we have seen that with mammals, birds, fishes, insects, etc., many characters, which there is every reason to believe were primarily gained through sexual selection by one sex, have been transferred to the other. As this same form of transmission has apparently prevailed much with mankind, it will save useless repetition if we discuss the origin of characters peculiar to the male sex together with certain other characters common to both sexes.

Law of Battle

With savages, for instance, the Australians, the women are the constant cause of war both between members of the same tribe and between distinct tribes. So no doubt it was in ancient times ; “nam fuit ante Helenam mulier teterrima belli causa.” With some of the North American Indians, the contest is reduced to a system. That excellent observer, Hearne,² says : “It has ever been the custom among these people for the men to wrestle for any woman to whom they are attached ; and, of course, the strongest party always carries off the prize. A weak man, unless he be a good hunter, and well beloved, is seldom permitted to keep a wife that a stronger man thinks worth his notice. This custom prevails throughout all the tribes, and causes a great spirit of emulation among their youth, who are upon all occasions, from their childhood, trying their strength and skill in wrestling.” With the Guanas of South America, Azara states that the men rarely marry till twenty years old or more, as before that age they cannot conquer their rivals.

Other similar facts could be given ; but even if we had no evidence on this head, we might feel almost sure, from the

¹ Rüttimeyer, *Die Grenzen der Thierwelt ; eine Betrachtung zu Darwin's Lehre*, 1868, s. 54.

² *A Journey from Prince of Wales Fort*, 8vo, edit. Dublin, 1796, p. 104. Sir J. Lubbock (*Origin of Civilization*, 1870, p. 69) gives other and similar cases in North America. For the Guanas of South America, see Azara, *Voyages etc.*, Tome II, p. 94.

analogy of the higher Quadrumana,¹ that the law of battle had prevailed with man during the early stages of his development. The occasional appearance at the present day of canine teeth which project above the others, with traces of a diastema, or open space for the reception of the opposite canines, is in all probability a case of reversion to a former state, when the progenitors of man were provided with these weapons, like so many existing male Quadrumana. It was remarked in a former chapter that as man gradually became erect, and continually used his hands and arms for fighting with sticks and stones, as well as for the other purposes of life, he would have used his jaws and teeth less and less. The jaws, together with their muscles, would then have been reduced through disuse, as would the teeth through the not well-understood principles of correlation and economy of growth; for we everywhere see that parts, which are no longer of service, are reduced in size. By such steps the original inequality between the jaws and teeth in the two sexes of mankind would ultimately have been obliterated. The case is almost parallel with that of many male Ruminants, in which the canine teeth have been reduced to mere rudiments, or have disappeared, apparently in consequence of the development of horns. As the prodigious difference between the skulls of the two sexes in the orang and gorilla stands in close relation with the development of the immense canine teeth in the males, we may infer that the reduction of the jaws and teeth in the early male progenitors of man must have led to a most striking and favorable change in his appearance.

There can be little doubt that the greater size and strength of man, in comparison with woman, together with his broader shoulders, more developed muscles, rugged outline of body, his greater courage and pugnacity, are all due in chief part to inheritance from his half-human male ancestors. These characters would, however, have been preserved, or even augmented during the long ages of man's savagery, by the success of the strongest

¹ On the fighting of the male gorillas, see Dr. Savage, in *Boston Journal of Natural History*, 1847, Vol. V, p. 423. On *Presbytis entellus*, see the Indian Field, 1859, p. 146.

and boldest men, both in the general struggle for life and in their contests for wives, a success which would have insured their leaving a more numerous progeny than their less favored brethren. It is not probable that the greater strength of man was primarily acquired through the inherited effects of his having worked harder than woman for his own subsistence and that of his family; for the women in all barbarous nations are compelled to work at least as hard as the men. With civilized people the arbitrament of battle for the possession of the women has long ceased; on the other hand, the men, as a general rule, have to work harder than the women for their joint subsistence, and thus their greater strength will have been kept up.

Difference in the Mental Powers of the Two Sexes

With respect to differences of this nature between man and woman, it is probable that sexual selection has played a highly important part. I am aware that some writers doubt whether there is any such inherent difference; but this is at least probable from the analogy of the lower animals which present other secondary sexual characters. No one disputes that the bull differs in disposition from the cow, the wild boar from the sow, the stallion from the mare, and, as is well known to the keepers of menageries, the males of the larger apes from the females. Woman seems to differ from man in mental disposition, chiefly in her greater tenderness and less selfishness; and this holds good even with savages, as shown by a well-known passage in Mungo Park's Travels, and by statements made by many other travelers. Woman, owing to her maternal instincts, displays these qualities towards her infants in an eminent degree; therefore it is likely that she would often extend them towards her fellow-creatures. Man is the rival of other men; he delights in competition, and this leads to ambition, which passes too easily into selfishness. These latter qualities seem to be his natural and unfortunate birthright. It is generally admitted that with woman the powers of intuition, of rapid perception, and perhaps of imitation are more strongly marked than in man; but some,

at least, of these faculties are characteristic of the lower races, and therefore of a past and lower state of civilization.

The chief distinction in the intellectual powers of the two sexes is shown by man's attaining to a higher eminence, in whatever he takes up, than can woman — whether requiring deep thought, reason, or imagination, or merely the use of the senses and hands. If two lists were made of the most eminent men and women in poetry, painting, sculpture, music (inclusive both of composition and performance), history, science, and philosophy, with half a dozen names under each subject, the two lists would not bear comparison. We may also infer, from the law of the deviation from averages, so well illustrated by Mr. Galton, in his work on Hereditary Genius, that if men are capable of a decided preëminence over women in many subjects, the average of mental power in man must be above that of woman.

Among the half-human progenitors of man, and among savages, there have been struggles between the males during many generations for the possession of the females. But mere bodily strength and size would do little for victory, unless associated with courage, perseverance, and determined energy. With social animals, the young males have to pass through many a contest before they win a female, and the older males have to retain their females by renewed battles. They have, also, as in the case of mankind, to defend their females, as well as their young, from enemies of all kinds, and to hunt for their joint subsistence. But to avoid enemies or to attack them with success, to capture wild animals, and to fashion weapons require the aid of the higher mental faculties, namely, observation, reason, invention, or imagination. These various faculties will thus have been continually put to the test and selected during manhood; they will, moreover, have been strengthened by use during this same period of life. Consequently, in accordance with the principle often alluded to, we might expect that they would at least tend to be transmitted chiefly to the male offspring at the corresponding period of manhood.

Now when two men are put into competition, or a man with a woman, both possessed of every mental quality in equal perfection, save that one has higher energy, perseverance, and

courage, the latter will generally become more eminent in every pursuit, and will gain the ascendancy.¹ He may be said to possess genius, for genius has been declared by a great authority to be patience; and patience, in this sense, means unflinching, undaunted perseverance. But this view of genius is perhaps deficient; for without the higher powers of the imagination and reason, no eminent success can be gained in many subjects. These latter faculties, as well as the former, will have been developed in man, partly through sexual selection, — that is, through the contest of rival males, and partly through natural selection, — that is, from success in the general struggle for life; and as in both cases the struggle will have been during maturity, the characters gained will have been transmitted more fully to the male than to the female offspring. It accords in a striking manner with this view of the modification and reënforcement of many of our mental faculties by sexual selection, that, firstly, they notoriously undergo a considerable change at puberty,² and, secondly, that eunuchs remain throughout life inferior in these same qualities. Thus man has ultimately become superior to woman. It is, indeed, fortunate that the law of the equal transmission of characters to both sexes prevails with mammals; otherwise it is probable that man would have become as superior in mental endowment to woman as the peacock is in ornamental plumage to the peahen.

It must be borne in mind that the tendency in characters acquired by either sex late in life to be transmitted to the same sex at the same age, and of early acquired characters to be transmitted to both sexes, are rules which, though general, do not always hold. If they always held good, we might conclude (but I here exceed my proper bounds) that the inherited effects of the early education of boys and girls would be transmitted equally to both sexes, so that the present inequality in mental power

¹ J. Stuart Mill remarks (*The Subjection of Women*, 1869, p. 122), "The things in which man most excels woman are those which require most plodding, and long hammering at single thoughts." What is this but energy and perseverance?

² Maudsley, *Mind and Body*, p. 31.

between the sexes would not be effaced by a similar course of early training; nor can it have been caused by their dissimilar early training. In order that woman should reach the same standard as man, she ought, when nearly adult, to be trained to energy and perseverance, and to have her reason and imagination exercised to the highest point; and then she would probably transmit these qualities chiefly to her adult daughters. All women, however, could not be thus raised, unless during many generations those who excelled in the above robust virtues were married, and produced offspring in larger numbers than other women. As before remarked of bodily strength, although men do not now fight for their wives, and this form of selection has passed away, yet during manhood they generally undergo a severe struggle in order to maintain themselves and their families; and this will tend to keep up or even increase their mental powers, and, as a consequence, the present inequality between the sexes.¹

Voice and Musical Powers

In some species of *Quadrupeds* there is a great difference between the adult sexes,—in the power of their voices and in the development of the vocal organs; and man appears to have inherited this difference from his early progenitors. His vocal cords are about one third longer than in woman, or than in boys; and emasculation produces the same effect on him as on the lower animals, for it “arrests that prominent growth of the thyroid, etc., which accompanies the elongation of the cords.”² With respect to the cause of this difference between the sexes, I have nothing to add to the remarks in the last chapter on the probable effects of the long-continued use of the vocal organs by the male

¹ An observation by Vogt bears on this subject. He says, “It is a remarkable circumstance that the difference between the sexes, as regards the cranial cavity, increases with the development of the race, so that the male European excels much more the female than the negro the negress. Welcker confirms this statement of Huschke from his measurements of negro and German skulls.” But Vogt admits (*Lectures on Man*, English translation, 1864, p. 81) that more observations are requisite on this point.

² Owen, *Anatomy of Vertebrates*, Vol. III, p. 603.

under the excitement of love, rage, and jealousy. According to Sir Duncan Gibb,¹ the voice and the form of the larynx differ in the different races of mankind; but with the Tartars, Chinese, etc., the voice of the male is said not to differ so much from that of the female as in most other races.

The capacity and love for singing or music, though not a sexual character in man, must not here be passed over. Although the sounds emitted by animals of all kinds serve many purposes, a strong case can be made out, that the vocal organs were primarily used and perfected in relation to the propagation of the species. Insects and some few spiders are the lowest animals which voluntarily produce any sound; and this is generally effected by the aid of beautifully constructed stridulating organs, which are often confined to the males. The sounds thus produced consist, I believe in all cases, of the same note repeated rhythmically;² and this is sometimes pleasing even to the ears of man. The chief and, in some cases, exclusive purpose appears to be either to call or charm the opposite sex.

The sounds produced by fishes are said in some cases to be made only by the males during the breeding season. All the air-breathing Vertebrata necessarily possess an apparatus for inhaling and expelling air, with a pipe capable of being closed at one end. Hence when the primeval members of this class were strongly excited and their muscles violently contracted, purposeless sounds would almost certainly have been produced; and these, if they proved in any way serviceable, might readily have been modified or intensified by the preservation of properly adapted variations. The lowest Vertebrates which breathe air are Amphibians; and of these, frogs and toads possess vocal organs, which are incessantly used during the breeding season, and which are more often highly developed in the male than in the female. The male alone of the tortoise utters a noise, and this only during the season of love. Male alligators roar or bellow during the same season. Every one knows how much birds

¹ *Journal of the Anthropological Society*, April, 1869, pp. lvii, lxvi.

² Dr. Scudder, "Notes on Stridulation," in *Proceedings Boston Society of Natural History*, April, 1868, Vol. XI.

use their vocal organs as a means of courtship ; and some species likewise perform what may be called instrumental music.

In the class of mammals, with which we are here more particularly concerned, the males of almost all the species use their voices during the breeding season much more than at any other time ; and some are absolutely mute excepting at this season. With other species both sexes, or only the females, use their voices as a love call. Considering these facts, and that the vocal organs of some quadrupeds are much more largely developed in the male than in the female, either permanently or temporarily during the breeding season ; and considering that in most of the lower classes the sounds produced by the males serve not only to call but to excite or allure the female,—it is a surprising fact that we have not as yet any good evidence that these organs are used by male mammals to charm the females. The American *Mycetes caraya* perhaps forms an exception, as does the *Hylobates agilis*, an ape allied to man. This gibbon has an extremely loud but musical voice. Mr. Waterhouse states :¹ “ It appeared to me that in ascending and descending the scale the intervals were always exactly half-tones ; and I am sure that the highest note was the exact octave to the lowest. The quality of the notes is very musical ; and I do not doubt that a good violinist would be able to give a correct idea of the gibbon’s composition, excepting as regards its loudness.” Mr. Waterhouse then gives the notes. Professor Owen, who is a musician, confirms the foregoing statement, and remarks, though erroneously, that this gibbon “ alone of brute mammals may be said to sing.” It appears to be much excited after its performance. Unfortunately, its habits have never been closely observed in a state of nature ; but from the analogy of other animals, it is probable that it uses its musical powers more especially during the season of courtship.

This gibbon is not the only species in the genus which sings, for my son, Francis Darwin, attentively listened in the Zoölogical Gardens to *H. leuciscus* while singing a cadence of three notes,

¹ Given in W. C. L. Martin’s General Introduction to Natural History of Mammalian Animals, 1841, p. 432 ; Owen, Anatomy of Vertebrates, Vol. III, p. 600.

in true musical intervals and with a clear musical tone. It is a more surprising fact that certain rodents utter musical sounds. Singing mice have often been mentioned and exhibited, but imposture has commonly been suspected. We have, however, at last a clear account by a well-known observer, the Rev. S. Lockwood,¹ of the musical powers of an American species, the *Hesperomys cognatus*, belonging to a genus distinct from that of the English mouse. This little animal was kept in confinement, and the performance was repeatedly heard. In one of the two chief songs, "the last bar would frequently be prolonged to two or three; and she would sometimes change from C sharp and D to C natural and D, then warble on these two notes awhile, and wind up with a quick chirp on C sharp and D. The distinctness between the semitones was very marked, and easily appreciable to a good ear." Mr. Lockwood gives both songs in musical notation, and adds that though this little mouse "had no ear for time, yet she would keep to the key of B (two flats) and strictly in a major key. . . . Her soft clear voice falls an octave with all the precision possible; then at the wind up it rises again into a very quick trill on C sharp and D."

A critic has asked how the ears of man, and he ought to have added of other animals, could have been adapted by selection so as to distinguish musical notes. But this question shows some confusion on the subject; a noise is the sensation resulting from the coexistence of several ærial "simple vibrations" of various periods, each of which intermits so frequently that its separate existence cannot be perceived. It is only in the want of continuity of such vibrations, and in their want of harmony *inter se*, that a noise differs from a musical note. Thus an ear to be capable of discriminating noises — and the high importance of this power to all animals is admitted by every one — must be sensitive to musical notes. We have evidence of this capacity even low down in the animal scale; thus Crustaceans are provided with auditory hairs of different lengths, which have been seen to vibrate when the proper musical notes are struck.² As stated in a previous

¹ The *American Naturalist*, 1871, p. 761.

² Helmholtz, *Théorie Phys. de la Musique*, 1868, p. 187.

chapter, similar observations have been made on the hairs of the antennæ of gnats. It has been positively asserted by good observers that spiders are attracted by music. It is also well known that some dogs howl when hearing particular tones.¹ Seals apparently appreciate music, and their fondness for it "was well known to the ancients, and is often taken advantage of by the hunters at the present day."²

Therefore, as far as the mere perception of musical notes is concerned, there seems no special difficulty in the case of man or of any other animal. Helmholtz has explained on physiological principles why concords are agreeable, and discords disagreeable, to the human ear; but we are little concerned with these, as music in harmony is a late invention. We are more concerned with melody, and here again, according to Helmholtz, it is intelligible why the notes of our musical scale are used. The ear analyzes all sounds into their component "simple vibrations," although we are not conscious of this analysis. In a musical note the lowest in pitch of these is generally predominant, and the others, which are less marked, are the octave, the twelfth, the second octave, etc., all harmonies of the fundamental predominant note; any two notes of our scale have many of these harmonic overtones in common. It seems pretty clear, then, that if an animal always wished to sing precisely the same song, he would guide himself by sounding those notes in succession which possess many overtones in common, — that is, he would choose for his song notes which belong to our musical scale.

But if it be further asked why musical tones in a certain order and rhythm give man and other animals pleasure, we can no more give the reason than for the pleasantness of certain tastes and smells. That they do give pleasure of some kind to animals we may infer from their being produced during the season of courtship by many insects, spiders, fishes, amphibians, and birds;

¹ Several accounts have been published to this effect. Mr. Peach writes to me that he has repeatedly found that an old dog of his howls when B flat is sounded on the flute, and to no other note. I may add another instance of a dog always whining when one note on a concertina, which was out of tune, was played.

² Mr. R. Brown, in *Proceedings Zoölogical Society*, 1868, p. 10.

for unless the females were able to appreciate such sounds and were excited or charmed by them, the persevering efforts of the males, and the complex structures often possessed by them alone, would be useless ; and this it is impossible to believe.

Human song is generally admitted to be the basis or origin of instrumental music. As neither the enjoyment nor the capacity of producing musical notes are faculties of the least use to man in reference to his daily habits of life, they must be ranked among the most mysterious with which he is endowed. They are present, though in a very rude condition, in men of all races, even the most savage ; but so different is the taste of the several races that our music gives no pleasure to savages, and their music is to us in most cases hideous and unmeaning. Dr. See-mann, in some interesting remarks on this subject,¹ "doubts whether even among the nations of Western Europe, intimately connected as they are by close and frequent intercourse, the music of the one is interpreted in the same sense by the others. By traveling eastward we find that there is certainly a different language of music. Songs of joy and dance accompaniments are no longer as, with us, in the major keys, but always in the minor." Whether or not the half-human progenitors of man possessed, like the singing gibbons, the capacity of producing, and therefore no doubt of appreciating, musical notes, we know that man possessed these faculties at a very remote period. M. Lartet described two flutes, made out of the bones and horns of the reindeer, found in caves together with flint tools and the remains of extinct animals. The arts of singing and of dancing are also very ancient, and are now practiced by all or nearly all the lowest races of man. Poetry, which may be considered as the offspring of song, is likewise so ancient that many persons have felt astonished that it should have arisen during the earliest ages of which we have any record.

We see that the musical faculties, which are not wholly deficient in any race, are capable of prompt and high development,

¹ *Journal of Anthropological Society*, October, 1870, p. clv. See also the several later chapters in Sir John Lubbock's *Prehistoric Times*, 2d ed., 1869, which contain an admirable account of the habits of savages.

for Hottentots and negroes have become excellent musicians, although in their native countries they rarely practice anything that we should consider music. Schweinfurth, however, was pleased with some of the simple melodies which he heard in the interior of Africa. But there is nothing anomalous in the musical faculties lying dormant in man; some species of birds, which never naturally sing, can without much difficulty be taught to do so: thus a house sparrow has learnt the song of a linnet. As these two species are closely allied and belong to the order of Insectores, which includes nearly all the singing-birds in the world, it is possible that a progenitor of the sparrow may have been a songster. It is more remarkable that parrots, belonging to a group distinct from the Insectores, and having differently constructed vocal organs, can be taught not only to speak but to pipe or whistle tunes invented by man, so that they must have some musical capacity. Nevertheless, it would be very rash to assume that parrots are descended from some ancient form which was a songster. Many cases could be advanced of organs and instincts originally adapted for one purpose, having been utilized for some distinct purpose.¹ Hence the capacity for high musical development, which the savage races of man possess, may be due either to the practice by our semihuman progenitors of some rude form of music, or simply to their having acquired the proper vocal organs for a different purpose. But in this latter case we must assume, as in the above instance of parrots, and as seems to occur with many animals, that they already possessed some sense of melody.

Music arouses in us various emotions, but not the more terrible ones of horror, fear, rage, etc. It awakens the gentler feelings of tenderness and love, which readily pass into devotion. In the

¹ Since this chapter was printed, I have seen a valuable article by Mr. Chauncey Wright (*North American Review*, October, 1870, p. 293), who, in discussing the above subject, remarks, "There are many consequences of the ultimate laws or uniformities of nature, through which the acquisition of one useful power will bring with it many resulting advantages as well as limiting disadvantages, actual or possible, which the principle of utility may not have comprehended in its action."

Chinese annals it is said, "Music hath the power of making heaven descend upon earth." It likewise stirs up in us the sense of triumph and the glorious ardor for war. These powerful and mingled feelings may well give rise to the sense of sublimity. We can concentrate, as Dr. Seemann observes, greater intensity of feeling in a single musical note than in pages of writing. It is probable that nearly the same emotions, but much weaker and far less complex, are felt by birds when the male pours forth his full volume of song, in rivalry with other males, to captivate the female. Love is still the commonest theme of our songs. As Herbert Spencer remarks, "Music arouses dormant sentiments of which we had not conceived the possibility, and do not know the meaning; or, as Richter says, tells us of things we have not seen and shall not see." Conversely, when vivid emotions are felt and expressed by the orator, or even in common speech, musical cadences and rhythm are instinctively used. The negro in Africa when excited often bursts forth in song; "another will reply in song, while the company, as if touched by a musical wave, murmur a chorus in perfect unison."¹ Even monkeys express strong feelings in different tones,—anger and impatience by low, fear and pain by high, notes.² The sensations and ideas thus excited in us by music, or expressed by the cadences of oratory, appear from their vagueness, yet depth, like mental reversions to the emotions and thoughts of a long-past age.

All these facts with respect to music and impassioned speech become intelligible to a certain extent, if we may assume that musical tones and rhythm were used by our half-human ancestors during the season of courtship, when animals of all kinds are excited not only by love but by the strong passions of jealousy, rivalry, and triumph. From the deeply laid principle of inherited associations, musical tones in this case would be likely to call up vaguely and indefinitely the strong emotions of a long-past age. As we have every reason to suppose that articulate speech is one

¹ Winwood Reade, *The Martyrdom of Man*, 1872, p. 441, and *African Sketch Book*, 1873, Vol. II, p. 313.

² Rengger, *Säugethiere von Paraguay*, s. 49.

of the latest, as it certainly is the highest, of the arts acquired by man, and as the instinctive power of producing musical notes and rhythms is developed low down in the animal series, it would be altogether opposed to the principle of evolution, if we were to admit that man's musical capacity has been developed from the tones used in impassioned speech. We must suppose that the rhythms and cadences of oratory are derived from previously developed musical powers.¹ We can thus understand how it is that music, dancing, song, and poetry are such very ancient arts. We may go even further than this, and, as remarked in a former chapter, believe that musical sounds afforded one of the bases for the development of language.²

As the males of several quadrumanous animals have their vocal organs much more developed than in the females, and as a gibbon, one of the anthropomorphous apes, pours forth a whole octave of musical notes and may be said to sing, it appears probable that the progenitors of man, either the males or females or both sexes, before acquiring the power of expressing their mutual love in articulate language, endeavored to charm each other with musical notes and rhythm. So little is known about the use of the voice by the *Quadrumana* during the season of love that we have no means of judging whether the habit of singing was first acquired by our male or female ancestors.

¹ See the very interesting discussion on the "Origin and Function of Music," by Herbert Spencer, in his collected Essays, 1858, p. 359. Mr. Spencer comes to an exactly opposite conclusion to that at which I have arrived. He concludes, as did Diderot formerly, that the cadences used in emotional speech afford the foundation from which music has been developed; while I conclude that musical notes and rhythm were first acquired by the male or female progenitors of mankind for the sake of charming the opposite sex. Thus musical tones became firmly associated with some of the strongest passions an animal is capable of feeling, and are consequently used instinctively, or through association, when strong emotions are expressed in speech. Mr. Spencer does not offer any satisfactory explanation, nor can I, why high or deep notes should be expressive, both with man and the lower animals, of certain emotions. Mr. Spencer gives also an interesting discussion on the relations between poetry, recitative and song.

² I find in Lord Monboddo's *Origin of Language*, 1774, Vol. I, p. 469, that Dr. Blacklock likewise thought "that the first language among men was music, and that before our ideas were expressed by articulate sounds, they were communicated by tones, varied according to different degrees of gravity and acuteness."

Women are generally thought to possess sweeter voices than men, and as far as this serves as any guide, we may infer that they first acquired musical powers in order to attract the other sex.¹ But if so, this must have occurred long ago, before our ancestors had become sufficiently human to treat and value their women merely as useful slaves. The impassioned orator, bard, or musician, when with his varied tones and cadences he excites the strongest emotions in his hearers, little suspects that he uses the same means by which his half-human ancestors long ago aroused each other's ardent passions during their courtship and rivalry.

*The Influence of Beauty in determining the Marriages of
Mankind*

In civilized life man is largely, but by no means exclusively, influenced in the choice of his wife by external appearance; but we are chiefly concerned with primeval times, and our only means of forming a judgment on this subject is to study the habits of existing semicivilized and savage nations. If it can be shown that the men of different races prefer women having various characteristics, or conversely with the women, we have then to inquire whether such choice, continued during many generations, would produce any sensible effect on the race, either on one sex or both, according to the form of inheritance which has prevailed.

It will be well first to show in some detail that savages pay the greatest attention to their personal appearance.² That they

¹ See an interesting discussion on this subject by Häckel, *Generelle Morph.*, 1866, B. II, s. 246.

² A full and excellent account of the manner in which savages in all parts of the world ornament themselves is given by the Italian traveler, Professor Mantegazza, "Rio de la Plata," *Viaggi e Studi*, 1867, pp. 525-545; all the following statements, when other references are not given, are taken from this work. See also Waitz, *Introduction to Anthropology*, English translation, 1863, Vol. I, p. 275, *et passim*. Lawrence also gives very full details in his *Lectures on Physiology*, 1822. Since this chapter was written, Sir J. Lubbock has published his *Origin of Civilization*, 1870, in which there is an interesting chapter on the present subject, and from which (pp. 42, 48) I have taken some facts about savages dyeing their teeth and hair, and piercing their teeth.

have a passion for ornament is notorious ; and an English philosopher goes so far as to maintain that clothes were first made for ornament and not for warmth. As Professor Waitz remarks, "However poor and miserable man is, he finds a pleasure in adorning himself." The extravagance of the naked Indians of South America in decorating themselves is shown "by a man of large stature gaining with difficulty enough by the labor of a fortnight to procure in exchange the *chica* necessary to paint himself red.¹ The ancient barbarians of Europe during the Reindeer period brought to their caves any brilliant or singular objects which they happened to find. Savages at the present day everywhere deck themselves with plumes, necklaces, armlets, earrings, etc. They paint themselves in the most diversified manner. "If painted nations," as Humboldt observes, "had been examined with the same attention as clothed nations, it would have been perceived that the most fertile imagination and the most mutable caprice have created the fashions of painting, as well as those of garments."

In one part of Africa the eyelids are colored black ; in another the nails are colored yellow or purple. In many places the hair is dyed of various tints. In different countries the teeth are stained black, red, blue, etc., and in the Malay Archipelago it is thought shameful to have white teeth "like those of a dog." Not one great country can be named, from the Polar regions in the north to New Zealand in the south, in which the aborigines do not tattoo themselves. This practice was followed by the Jews of old, and by the ancient Britons. In Africa some of the natives tattoo themselves, but it is a much more common practice to raise protuberances by rubbing salt into incisions made in various parts of the body ; and these are considered by the inhabitants of Kordofan and Darfur "to be great personal attractions." In the Arab countries no beauty can be perfect until the cheeks "or temples have been gashed."² In South America, as Humboldt

¹ Humboldt, *Personal Narrative*, English translation, Vol. IV, p. 515; on the imagination shown in painting the body, p. 522; on modifying the form of the calf of the leg, p. 466.

² *The Nile Tributaries*, 1867; *The Albert Nyanza*, 1866, Vol. I, p. 218.

remarks, "a mother would be accused of culpable indifference toward her children, if she did not employ artificial means to shape the calf of the leg after the fashion of the country." In the Old and New Worlds the shape of the skull was formerly modified during infancy in the most extraordinary manner, as is still the case in many places, and such deformities are considered ornamental. For instance, the savages of Colombia¹ deem a much flattened head "an essential point of beauty."

The hair is treated with especial care in various countries; it is allowed to grow to full length, so as to reach to the ground, or is combed into "a compact frizzled mop, which is the Papuan's pride and glory."² In northern Africa "a man requires a period of from eight to ten years to perfect his coiffure." With other nations the head is shaved, and in parts of South America and Africa even the eyebrows and eyelashes are eradicated. The natives of the Upper Nile knock out the four front teeth, saying that they do not wish to resemble brutes. Further south, the Batokas knock out only the two upper incisors, which, as Livingstone³ remarks, gives the face a hideous appearance, owing to the prominence of the lower jaw; but these people think the presence of the incisors most unsightly, and on beholding some Europeans, cried out, "Look at the great teeth!" The chief Sebituani tried in vain to alter this fashion. In various parts of Africa and in the Malay Archipelago the natives file the incisors into points like those of a saw, or pierce them with holes into which they insert studs.

As the face with us is chiefly admired for its beauty, so with savages it is the chief seat of mutilation. In all quarters of the world the septum and more rarely the wings of the nose are pierced, rings, sticks, feathers, and other ornaments being inserted into the holes. The ears are everywhere pierced and similarly ornamented, and with the Botocudos and Lenguas of South America the hole is gradually so much enlarged that the lower edge

¹ Quoted by Prichard, *Physical History of Mankind*, 4th ed., 1851, Vol. I, p. 321.

² On the Papuans, see Wallace, *The Malay Archipelago*, Vol. II, p. 445. On the coiffure of the Africans, see Sir S. Baker, *The Albert Nyanza*, Vol. I, p. 210.

³ *Travels*, p. 533.

touches the shoulder. In North and South America and in Africa either the upper or lower lip is pierced; and with the Botocudos the hole in the lower lip is so large that a disk of wood four inches in diameter is placed in it. Mantegazza gives a curious account of the shame felt by a South American native, and of the ridicule which he excited when he sold his *tembeta*, — the large colored piece of wood which is passed through the hole. In central Africa the women perforate the lower lip and wear a crystal, which, from the movement of the tongue, has “a wriggling motion, indescribably ludicrous during conversation.” The wife of the chief of Latooka told Sir S. Baker¹ that Lady Baker “would be much improved if she would extract her four front teeth from the lower jaw and wear the long pointed polished crystal in her under lip.” Further south with the Makololo, the upper lip is perforated and a large metal and bamboo ring, called a *pelelé*, is worn in the hole. “This caused the lip in one case to project two inches beyond the tip of the nose; and when the lady smiled the contraction of the muscles elevated it over the eyes. ‘Why do the women wear these things?’ the venerable chief, Chinsurdi, was asked. Evidently surprised at such a stupid question, he replied, ‘For beauty! They are the only beautiful things women have: men have beards, women have none. What kind of person would she be without the *pelelé*? She would not be a woman at all with a mouth like a man but no beard.’ ”²

Hardly any part of the body, which can be unnaturally modified, has escaped. The amount of suffering thus caused must have been extreme, for many of the operations require several years for their completion, so that the idea of their necessity must be imperative. The motives are various; the men paint their bodies to make themselves appear terrible in battle; certain mutilations are connected with religious rites, or they mark the age of puberty, or the rank of the man, or they serve to distinguish the tribes. Among savages the same fashions prevail for long

¹ The Albert Nyanza, 1866, Vol. I, p. 217.

² Livingstone, *British Association*, 1860; report given in the *Athenaeum*, July 7, 1860, p. 29.

periods,¹ and thus mutilations, from whatever cause first made, soon come to be valued as distinctive marks. But self-adornment, vanity, and the admiration of others seem to be the commonest motives. In regard to tattooing, I was told by the missionaries in New Zealand that when they tried to persuade some girls to give up the practice, they answered, "We must just have a few lines on our lips, else when we grow old we shall be so very ugly." With the men of New Zealand, a most capable judge² says, "To have fine tattooed faces was the great ambition of the young both to render themselves attractive to the ladies and conspicuous in war." A star tattooed on the forehead and a spot on the chin are thought by the women in one part of Africa to be irresistible attractions.³ In most but not all parts of the world the men are more ornamented than the women, and often in a different manner; sometimes, though rarely, the women are hardly at all ornamented. As the women are made by savages to perform the greatest share of the work, and as they are not allowed to eat the best kinds of food, so it accords with the characteristic selfishness of man that they should not be allowed to obtain or use the finest ornaments. Lastly, it is a remarkable fact, as proved by the foregoing quotations, that the same fashions in modifying the shape of the head, in ornamenting the hair, in painting, in tattooing, in perforating the nose, lips, or ears, in removing or filing the teeth, etc., now prevail and have long prevailed in the most distant quarters of the world. It is extremely improbable that these practices, followed by so many distinct nations, should be due to tradition from any common source. They indicate the close similarity of the mind of man, to whatever race he may belong, just as do the almost universal habits of dancing, masquerading, and making rude pictures.

Having made these preliminary remarks on the admiration felt by savages for various ornaments, and for deformities most

¹ Sir S. Baker (*The Albert Nyanza*, Vol. I, p. 210), speaking of the natives of central Africa says, "Every tribe has a distinct and unchanging fashion for dressing the hair." See Agassiz (*Journey in Brazil*, 1868, p. 318) on the invariability of the tattooing of the Amazonian Indians.

² Rev. R. Taylor, *New Zealand and its Inhabitants*, 1855, p. 152.

³ Mantegazza, *Viaggi e Studi*, p. 542.

unsightly in our eyes, let us see how far the men are attracted by the appearance of their women, and what are their ideas of beauty. I have heard it maintained that savages are quite indifferent about the beauty of their women, valuing them solely as slaves; it may therefore be well to observe that this conclusion does not at all agree with the care which the women take in ornamenting themselves or with their vanity. Burchell¹ gives an amusing account of a Bushwoman who used as much grease, red ochre, and shining powder "as would have ruined any but a very rich husband." She displayed also "much vanity and too evident a consciousness of her superiority." Mr. Winwood Reade informs me that the negroes of the west coast often discuss the beauty of their women. Some competent observers have attributed the fearfully common practice of infanticide partly to the desire felt by the women to retain their good looks.² In several regions the women wear charms and use love philters to gain the affections of the men; and Mr. Brown enumerates four plants used for this purpose by the women of northwestern America.³

Hearne,⁴ an excellent observer, who lived many years with the American Indians, says, in speaking of the women, "Ask a Northern Indian what is beauty, and he will answer, a broad flat face, small eyes, high cheek bones, three or four broad black lines across each cheek, a low forehead, a large broad chin, a clumsy hook nose, a tawny hide, and breasts hanging down to the belt." Pallas, who visited the northern parts of the Chinese Empire, says, "Those women are preferred who have the Mandschú form; that is to say, a broad face, high cheek bones, very broad noses, and enormous ears;"⁵ and Vogt remarks that the

¹ *Travels in South Africa*, 1824, Vol. I, p. 414.

² See for references, Gerland, *Ueber das Aussterben der Naturvölker*, 1868, s. 51, 53, 55; also Azara, *Voyages*, etc., Tome II, p. 116.

³ On the vegetable productions used by the Northwestern American Indians, *Pharmaceutical Journal*, Vol. X.

⁴ *A Journey from Prince of Wales Fort*, 8vo, edit. 1796, p. 89.

⁵ Quoted by Prichard, *Physical History of Mankind*, 1844, 3d ed., Vol. IV, p. 519; Vogt, *Lectures on Man*, English translation, p. 129. On the opinion of the Chinese on the Cingalese, E. Tennent, *Ceylon*, 1859, Vol. II, p. 107.

obliquity of the eye, which is proper to the Chinese and Japanese, is exaggerated in their pictures for the purpose, as it seems, "of exhibiting its beauty, as contrasted with the eye of the red-haired barbarians." It is well known, as Huc repeatedly remarks, that the Chinese of the interior think Europeans hideous, with their white skins and prominent noses. The nose is far from being too prominent, according to our ideas, in the natives of Ceylon; yet "the Chinese in the seventh century, accustomed to the flat features of the Mongol races, were surprised at the prominent noses of the Cingalese; and Thsang described them as 'having the beak of a bird, with the body of a man.'"

Finlayson, after minutely describing the people of Cochin China, says that their rounded heads and faces are their chief characteristics; and he adds, "The roundness of the whole countenance is more striking in the women, who are reckoned beautiful in proportion as they display this form of face." The Siamese have small noses with divergent nostrils, a wide mouth, rather thick lips, a remarkably large face, with very high and broad cheek bones. It is, therefore, not wonderful that "beauty, according to our notion, is a stranger to them. Yet they consider their own females to be much more beautiful than those of Europe."¹

It is well known that with many Hottentot women the posterior part of the body projects in a wonderful manner; they are steatopygous; and Sir Andrew Smith is certain that this peculiarity is greatly admired by the men.² He once saw a woman who was considered a beauty, and she was so immensely developed behind that when seated on level ground she could not rise, and had to push herself along until she came to a slope. Some of the women in various negro tribes have the same peculiarity; and, according to Burton, the Somal men "are said to choose their wives by ranging them in a line, and by picking her

¹ Prichard, as taken from Crawford and Finlayson, *Physical History of Mankind*, Vol. IV, pp. 534, 536.

² *Idem illustrissimus viator dixit mihi praeinctorium vel tabulam foeminae, quod nobis teterrimum est, quondam permagno aestimari ab hominibus in hac gente. Nunc res mutata est, et censent talem conformationem minime optandam esse.*

out who projects farthest *a tergo*. Nothing can be more hateful to a negro than the opposite form."¹

With respect to color, the negroes rallied Mungo Park on the whiteness of his skin and the prominence of his nose, both of which they considered as "unsightly and unnatural conformations." He in return praised the glossy jet of their skins and the lovely depression of their noses; this they said was "honey-mouth," nevertheless they gave him food. The African Moors, also, "knitted their brows and seemed to shudder" at the whiteness of his skin. On the eastern coast the negro boys, when they saw Burton, cried out, "Look at the white man; does he not look like a white ape?" On the western coast, as Mr. Winwood Reade informs me, the negroes admire a very black skin more than one of a lighter tint. But their horror of whiteness may be attributed, according to this same traveler, partly to the belief held by most negroes that demons and spirits are white, and partly to their thinking it a sign of ill health.

The Banyai of the more southern part of the continent are negroes, but "a great many of them are of a light coffee-and-milk color, and, indeed, this color is considered handsome throughout the whole country;" so that here we have a different standard of taste. With the Kafirs, who differ much from negroes, "the skin, except among the tribes near Delagoa Bay, is not usually black, the prevailing color being a mixture of black and red, the most common shade being chocolate. Dark complexions, as being most common, are naturally held in the highest esteem. To be told that he is light colored, or like a white man, would be deemed a very poor compliment by a Kafir. I have heard of one unfortunate man who was so very fair that no girl would marry him." One of the titles of the Zulu king is, "You who are black."² Mr. Galton, in speaking to me about the natives of South Africa,

¹ The *Anthropological Review*, November, 1864, p. 237. For additional references see Waitz, Introduction to Anthropology, English translation, 1863, Vol. I, p. 105.

² Mungo Park's *Travels in Africa*, 4to, 1816, pp. 53, 131. Burton's statement is quoted by Schaaffhausen, *Archiv für Anthropologie*, 1866, s. 163. On the Banyai, see Livingstone, *Travels*, p. 64. On the Kafirs, see the Rev. J. Shooter, *The Kafirs of Natal and the Zulu Country*, 1857, p. 1.

remarked that their ideas of beauty seem very different from ours ; for in one tribe two slim, slight, and pretty girls were not admired by the natives.

Turning to other quarters of the world ; in Java a yellow not a white girl is considered, according to Madame Pfeiffer, a beauty. A man of Cochin China "spoke with contempt of the wife of the English ambassador, that she had white teeth like a dog, and a rosy color like that of potato flowers." We have seen that the Chinese dislike our white skin, and that the North Americans admire "a tawny hide." In South America the Yurucares, who inhabit the wooded, damp slopes of the eastern Cordillera, are remarkably pale colored, as their name in their own language expresses ; nevertheless they consider European women as very inferior to their own.¹

In several tribes of North America the hair on the head grows to a wonderful length ; and Catlin gives a curious proof of how much this is esteemed, for the chief of the Crows was elected to this office from having the longest hair of any man in the tribe, namely, ten feet and seven inches. The Aymaras and Quichuas of South America likewise have very long hair ; and this, as Mr. D. Forbes informs me, is so much valued as a beauty that cutting it off was the severest punishment which he could inflict on them. In both the northern and southern halves of the continent the natives sometimes increase the apparent length of the hair by weaving into it fibrous substances. Although the hair on the head is thus cherished, that on the face is considered by the North American Indians "as very vulgar," and every hair is carefully eradicated. This practice prevails throughout the American continent, from Vancouver's Island in the north to Tierra del Fuego in the south. When York Minster, a Fuegian on board the *Beagle*, was taken back to his country, the natives told him he ought to pull out the few short hairs on his face. They also threatened a young missionary, who was left for a

¹ For the Javans and Cochin Chinese, see Waitz, *Introduction to Anthropology*, English translation, Vol. I, p. 305. On the Yuracaras, A. d'Orligny, as quoted in Prichard, *Physical History of Mankind*, 3d ed., Vol. V, p. 476.

time with them, to strip him naked, and pluck the hairs from his face and body, yet he was far from being a hairy man. This fashion is carried so far that the Indians of Paraguay eradicate their eyebrows and eyelashes, saying that they do not wish to be like horses.¹

It is remarkable that throughout the world the races which are almost completely destitute of a beard dislike hairs on the face and body, and take pains to eradicate them. The Kal-mucks are beardless, and they are well known, like the Americans, to pluck out all straggling hairs; and so it is with the Polynesians, some of the Malays, and the Siamese. Mr. Veitch states that the Japanese ladies "all objected to our whiskers, considering them very ugly, and told us to cut them off, and be like Japanese men." The New Zealanders have short, curled beards, yet they formerly plucked out the hairs on the face. They had a saying that "There is no woman for a hairy man"; but it would appear that the fashion has changed in New Zealand, perhaps owing to the presence of Europeans, and I am assured that beards are now admired by the Maoris.²

On the other hand, bearded races admire and greatly value their beards. Among the Anglo-Saxons every part of the body had a recognized value, the loss of the beard being estimated at twenty shillings, while the breaking of a thigh was fixed at only twelve.³ In the East men swear solemnly by their beards. We have seen that Chinsurdi, the chief of the Makololo in Africa, thought that beards were a great ornament. In the Pacific the Fijian's beard is "profuse and bushy, and is his greatest pride"; while the inhabitants of the adjacent archipelagoes of Tonga and Samoa are "beardless and abhor a rough

¹ North American Indians, by G. Catlin, 3d ed., 1842, Vol. I, p. 4; Vol. II, p. 227. On the natives of Vancouver's Island, see Sproat, *Scenes and Studies of Savage Life*, 1868, p. 25. On the Indians of Paraguay, see Azara, *Voyages*, Tome II, p. 105.

² On the Siamese, see Prichard, *Physical History of Mankind*, Vol. IV, p. 533. On the Japanese, see Veitch in *Gardeners' Chronicle*, 1860, p. 1104. On the New Zealanders, see Mantegazza, *Viaggi e Studi*, 1867, p. 526. For the other nations mentioned, see references in Lawrence, *Lectures on Physiology*, etc., 1822, p. 272.

³ Lubbock, *Origin of Civilization*, 1870, p. 321.

chin." In one island alone of the Ellice group "the men are heavily bearded, and not a little proud thereof."¹

We thus see how widely the different races of man differ in their taste for the beautiful. In every nation sufficiently advanced to have made effigies of their gods or their deified rulers, the sculptors no doubt have endeavored to express their highest ideal of beauty and grandeur.² Under this point of view it is well to compare in our mind the Jupiter or Apollo of the Greeks with the Egyptian or Assyrian statues; and these with the hideous bas-reliefs on the ruined buildings of Central America.

I have met with very few statements opposed to this conclusion. Mr. Winwood Reade, however, who has had ample opportunities for observation, not only with the negroes of the west coast of Africa but with those of the interior who have never associated with Europeans, is convinced that their ideas of beauty are *on the whole* the same as ours; and Dr. Rohlfs writes to me to the same effect with respect to Bornu and the countries inhabited by the Fulah tribes. Mr. Reade found that he agreed with the negroes in their estimation of the beauty of the native girls; and that their appreciation of the beauty of European women corresponded with ours. They admire long hair, using artificial means to make it appear abundant; they admire also a beard, though themselves very scantily provided. Mr. Reade feels doubtful what kind of a nose is most appreciated; a girl has been heard to say, "I do not want to marry him, he has got no nose"; and this shows that a very flat nose is not admired. We should, however, bear in mind that the depressed, broad noses and projecting jaws of the negroes of the west coast are exceptional types with the inhabitants of Africa. Notwithstanding the foregoing statements, Mr. Reade admits that negroes "do not like the color of our skin; they look on blue eyes with aversion, and they think our noses too long and our lips too thin." He does not think it probable that negroes would ever prefer the most beautiful European

¹ Dr. Barnard Davis quotes Mr. Prichard and others for these facts in regard to the Polynesians, in *Anthropological Review*, April, 1870, pp. 185, 191.

² Ch. Comte has remarks to this effect in his *Traité de Législation*, 3d ed., 1837, p. 136.

woman, on the mere grounds of physical admiration, to a good-looking negress.¹

The general truth of the principle, long ago insisted on by Humboldt,² that man admires and often tries to exaggerate whatever characters nature may have given him, is shown in many ways. The practice of beardless races extirpating every trace of a beard, and often all the hairs on the body, affords one illustration. The skull has been greatly modified during ancient and modern times by many nations; and there can be little doubt that this has been practiced, especially in North and South America, in order to exaggerate some natural and admired peculiarity. Many American Indians are known to admire a head so extremely flattened as to appear to us idiotic. The natives on the north-western coast compress the head into a pointed cone; and it is their constant practice to gather the hair into a knot on the top of the head, for the sake, as Dr. Wilson remarks, "of increasing the apparent elevation of the favorite conoid form." The inhabitants of Arakan "admire a broad, smooth forehead, and in order to produce it, they fasten a plate of lead on the heads of the newborn children." On the other hand, "a broad, well-rounded occiput is considered a great beauty" by the natives of the Fiji Islands.³

As with the skull, so with the nose; the ancient Huns during the age of Attila were accustomed to flatten the noses of their

¹ The African Sketch Book, 1873, Vol. II, pp. 253, 394, 521. The Fuegians, as I have been informed by a missionary who long resided with them, consider European women as extremely beautiful; but from what we have seen of the judgment of the other aborigines of America, I cannot but think that this must be a mistake, unless indeed the statement refers to the few Fuegians who have lived for some time with Europeans, and who must consider us as superior beings. I should add that a most experienced observer, Captain Burton, believes that a woman whom we consider beautiful is admired throughout the world (*Anthropological Review*, March, 1864, p. 245).

² Personal Narrative, English translation, Vol. IV, p. 518, and elsewhere. Mantegazza, in his *Viaggi e Studi*, 1867, strongly insists on this same principle.

³ On the skulls of the American tribes, see Nott and Gliddon, *Types of Mankind*, 1854, p. 440; Prichard, *Physical History of Mankind*, 3d ed., Vol. I, p. 321. On the natives of Arakan, see *Physical History of Mankind*, Vol. IV, p. 537; Wilson, *Physical Ethnology*, Smithsonian Institution, 1863, p. 288. On the Fijians, see Wilson, *Physical Ethnology*, Smithsonian Institution, 1863, p. 290. Sir J. Lubbock (*Prehistoric Times*, 2d ed., 1869, p. 506) gives an excellent résumé on this subject.

infants with bandages, "for the sake of exaggerating a natural conformation." With the Tahitians, to be called "long-nose" is considered as an insult, and they compress the noses and foreheads of their children for the sake of beauty. The same holds with the Malays of Sumatra, the Hottentots, certain negroes, and the natives of Brazil.¹ The Chinese have by nature unusually small feet;² and it is well known that the women of the upper classes distort their feet to make them still smaller. Lastly, Humboldt thinks that the American Indians prefer coloring their bodies with red paint in order to exaggerate their natural tint; and until recently European women added to their naturally bright colors by rouge and white cosmetics; but it may be doubted whether barbarous nations have generally had any such intention in painting themselves.

In the fashions of our own dress we see exactly the same principle and the same desire to carry every point to an extreme; we exhibit, also, the same spirit of emulation. But the fashions of savages are far more permanent than ours; and whenever their bodies are artificially modified, this is necessarily the case. The Arab women of the upper Nile occupy about three days in dressing their hair; they never imitate other tribes, "but simply vie with each other in the superlativeness of their own style." Dr. Wilson, in speaking of the compressed skulls of various American races, adds, "Such usages are among the least eradicable, and long survive the shock of revolutions that change dynasties and efface more important national peculiarities."³ The same principle comes into play in the art of breeding; and we can thus understand, as I have elsewhere explained,⁴ the wonderful development of the many races of animals and plants, which

¹ On the Huns, see Godron, *De l'Espèce*, 1859, Tome II, p. 300. On the Tahitians, see Waitz, *Anthropology*, English translation, Vol. I, p. 305. Marsden, quoted by Prichard in *Physical History of Mankind*, 3d ed., Vol. V, p. 67. Lawrence, *Lectures on Physiology*, p. 337.

² This fact was ascertained in the *Reise der Novara*: "Anthropolog. Theil," Dr. Weisbach, 1867, s. 265.

³ Smithsonian Institution, 1863, p. 289. On the fashions of Arab women, see Sir S. Baker, *The Nile Tributaries*, 1867, p. 121.

⁴ *The Variation of Animals and Plants under Domestication*, Vol. I, p. 214; Vol. II, p. 240.

have been kept merely for ornament. Fanciers always wish each character to be somewhat increased; they do not admire a medium standard; they certainly do not desire any great and abrupt change in the character of their breeds; they admire solely what they are accustomed to, but they ardently desire to see each characteristic feature a little more developed.

The senses of man and of the lower animals seem to be so constituted that brilliant colors and certain forms, as well as harmonious and rhythmical sounds, give pleasure and are called beautiful; but why this should be so, we know not. It is certainly not true that there is in the mind of man any universal standard of beauty with respect to the human body. It is, however, possible that certain tastes may in the course of time become inherited, though there is no evidence in favor of this belief; and if so, each race would possess its own innate ideal standard of beauty. It has been argued¹ that ugliness consists in an approach to the structure of the lower animals, and no doubt this is partly true with the more civilized nations in which intellect is highly appreciated; but this explanation will hardly apply to all forms of ugliness. The men of each race prefer what they are accustomed to; they cannot endure any great change; but they like variety and admire each characteristic carried to a moderate extreme.² Men accustomed to a nearly oval face, to straight and regular features, and to bright colors admire, as we Europeans know, these points when strongly developed. On the other hand, men accustomed to a broad face with high cheek bones, a depressed nose, and a black skin admire these peculiarities when strongly marked. No doubt characters of all kinds may be too much developed for beauty. Hence a perfect beauty, which implies many characters modified in a particular manner, will be in every race a prodigy. As the great anatomist Bichat long ago said, if every one were cast in the same mold, there would be no such thing as beauty. If all our women were to

¹ Schaaffhausen, *Archiv für Anthropologie*, 1866, s. 164.

² Mr. Bain has collected (*Mental and Moral Science*, 1668, pp. 304-314) about a dozen more or less different theories of the idea of beauty; but none are quite the same as that here given.

become as beautiful as the Venus de' Medici, we should for a time be charmed ; but we should soon wish for variety ; and as soon as we had obtained variety we should wish to see certain characters a little exaggerated beyond the then existing common standard.

We have seen in the last chapter that with all barbarous races ornaments, dress, and external appearance are highly valued ; and that the men judge of the beauty of their women by widely different standards. We must next inquire whether this preference and the consequent selection during many generations of those women, which appear to the men of each race the most attractive, has altered the character either of the females alone, or of both sexes. With mammals the general rule appears to be that characters of all kinds are inherited equally by the males and females ; we might therefore expect that with mankind any characters gained by the females or by the males through sexual selection would commonly be transferred to the offspring of both sexes. If any change has thus been effected, it is almost certain that the different races would be differently modified, as each has its own standard of beauty.

With mankind, especially with savages, many causes interfere with the action of sexual selection as far as the bodily frame is concerned. Civilized men are largely attracted by the mental charms of women, by their wealth, and especially by their social position ; for men rarely marry into a much lower rank. The men who succeed in obtaining the more beautiful women will not have a better chance of leaving a long line of descendants than other men with plainer wives, save the few who bequeath their fortunes according to primogeniture. With respect to the opposite form of selection, namely, of the more attractive men by the women, although in civilized nations women have free or almost free choice, which is not the case with barbarous races, yet their choice is largely influenced by the social position and wealth of the men ; and the success of the latter in life depends much on their intellectual powers and energy, or on the fruits of these same powers in their forefathers. No excuse is needed for treating this subject in some detail ; for, as the German philosopher Schopenhauer remarks, "the final aim of all love intrigues,

be they comic or tragic, is really of more importance than all other ends in human life. What it all turns upon is nothing less than the composition of the next generation. . . . It is not the weal or woe of any one individual, but that of the human race to come, which is here at stake."¹

There is, however, reason to believe that in certain civilized and semicivilized nations sexual selection has effected something in modifying the bodily frame of some of the members. Many persons are convinced, as it appears to me with justice, that our aristocracy, including under this term all wealthy families in which primogeniture has long prevailed, from having chosen during many generations from all classes the more beautiful women as their wives, have become handsomer, according to the European standard, than the middle classes; yet the middle classes are placed under equally favorable conditions of life for the perfect development of the body. Cook remarks that the superiority in personal appearance "which is observable in the erees or nobles in all the other islands (of the Pacific) is found in the Sandwich Islands"; but this may be chiefly due to their better food and manner of life.

The old traveler Chardin, in describing the Persians, says their "blood is now highly refined by frequent intermixtures with the Georgians and Circassians, two nations which surpass all the world in personal beauty. There is hardly a man of rank in Persia who is not born of a Georgian or Circassian mother." He adds that they inherit their beauty "not from their ancestors, for without the above mixture, the men of rank in Persia, who are descendants of the Tartars, would be extremely ugly."² Here is a more curious case: the priestesses who attended the temple of Venus Erycina at San Giuliano in Sicily were selected for their beauty out of the whole of Greece; they were not vestal virgins, and Quatrefages,³ who states the foregoing fact, says that the

¹ "Schopenhauer and Darwinism," in *Journal of Anthropology*, January, 1871, p. 323.

² These quotations are taken from Lawrence (Lectures on Physiology, etc., 1822, p. 393), who attributes the beauty of the upper classes in England to the men having long selected the more beautiful women.

³ "Anthropologie," *Revue des Cours Scientifiques*, October, 1868, p. 721.

women of San Giuliano are now famous as the most beautiful in the island, and are sought by artists as models. But it is obvious that the evidence in all the above cases is doubtful.

The following case, though relating to savages, is well worth giving from its curiosity. Mr. Winwood Reade informs me that the Jolofs, a tribe of negroes on the west coast of Africa, "are remarkable for their uniformly fine appearance." A friend of his asked one of these men, "How is it that every one whom I meet is so fine looking, not only your men but your women?" The Jolof answered, "It is very easily explained; it has always been our custom to pick out our worse-looking slaves and to sell them." It need hardly be added that with all savages, female slaves serve as concubines. That this negro should have attributed, whether rightly or wrongly, the fine appearance of his tribe to the long-continued elimination of the ugly women is not so surprising as it may at first appear; for I have elsewhere shown¹ that the negroes fully appreciate the importance of selection in the breeding of their domestic animals, and I could give from Mr. Reade additional evidence on this head.

The Causes which prevent or check the Action of Sexual Selection with Savages

The chief causes are, first, so-called communal marriages or promiscuous intercourse; secondly, the consequences of female infanticide; thirdly, early betrothals; and lastly, the low estimation in which women are held, as mere slaves. These four points must be considered in some detail.

It is obvious that as long as the pairing of man, or of any other animal, is left to mere chance, with no choice exerted by either sex, there can be no sexual selection; and no effect will be produced on the offspring by certain individuals having had an advantage over others in their courtship. Now it is asserted that there exist at the present day tribes which practice what Sir J. Lubbock by courtesy calls communal marriages; that is, all the men and women in the tribe are husbands and wives to one

¹ The Variation of Animals and Plants under Domestication, Vol. I, p. 207.

another. The licentiousness of many savages is no doubt astonishing, but it seems to me that more evidence is requisite, before we fully admit that their intercourse is in any case promiscuous. Nevertheless all those who have most closely studied the subject,¹ and whose judgment is worth much more than mine, believe that communal marriage (this expression being variously guarded) was the original and universal form throughout the world, including therein the intermarriage of brothers and sisters. The late Sir A. Smith, who had traveled widely in South Africa, and knew much about the habits of savages there and elsewhere, expressed to me the strongest opinion that no race exists in which woman is considered as the property of the community. I believe that his judgment was largely determined by what is implied by the term "marriage." Throughout the following discussion I use the term in the same sense as when naturalists speak of animals as monogamous, meaning thereby that the male is accepted by or chooses a single female, and lives with her either during the breeding season, or for the whole year, keeping possession of her by the law of might; or, as when they speak of a polygamous species, meaning that the male lives with several females. This kind of marriage is all that concerns us here, as it suffices the work of sexual selection. But I know that some of the writers, above referred to, imply by the term "marriage," a recognized right, protected by the tribe.

The indirect evidence in favor of the belief of the former prevalence of communal marriages is strong, and rests chiefly on the terms of relationship which are employed between the members of the same tribe, implying a connection with the tribe and not with either parent. But the subject is too large and complex for

¹ Sir J. Lubbock, *The Origin of Civilization*, 1870, chap. iii, especially pp. 60-67. Mr. M'Lennan, in his extremely valuable work on *Primitive Marriage*, 1865, p. 162, speaks of the union of the sexes in the earliest times as "loose, transitory, and in some degree promiscuous." Mr. M'Lennan and Sir J. Lubbock have collected much evidence on the extreme licentiousness of savages at the present time. Mr. L. H. Morgan, in his interesting memoir on the classificatory system of relationship (*Proceedings American Academy of Sciences*, February, 1868, Vol. VII, p. 475), concludes that polygamy and all forms of marriage during primeval times were essentially unknown. It appears also, from Sir J. Lubbock's work, that Bachofen likewise believes that communal intercourse originally prevailed.

even an abstract to be here given, and I will confine myself to a few remarks. It is evident in the case of such marriages, or where the marriage tie is very loose, that the relationship of the child to its father cannot be known. But it seems almost incredible that the relationship of the child to its mother should ever be completely ignored, especially as the women in most savage tribes nurse their infants for a long time. Accordingly, in many cases the lines of descent are traced through the mother alone, to the exclusion of the father. But in other cases the terms employed express a connection with the tribe alone, to the exclusion even of the mother. It seems possible that the connection between the related members of the same barbarous tribe, exposed to all sorts of danger, might be so much more important, owing to the need of mutual protection and aid, than that between the mother and her child, as to lead to the sole use of terms expressive of the former relationships; but Mr. Morgan is convinced that this view is by no means sufficient.

The terms of relationship used in different parts of the world may be divided, according to the author just quoted, into two great classes, the classificatory and descriptive, — the latter being employed by us. It is the classificatory system which so strongly leads to the belief that communal and other extremely loose forms of marriage were originally universal. But as far as I can see, there is no necessity on this ground for believing in absolutely promiscuous intercourse; and I am glad to find that this is Sir J. Lubbock's view. Men and women, like many of the lower animals, might formerly have entered into strict though temporary unions for each birth, and in this case nearly as much confusion would have arisen in the terms of relationship as in the case of promiscuous intercourse. As far as sexual selection is concerned, all that is required is that choice should be exerted before the parents unite, and it signifies little whether the unions last for life or only for a season.

Besides the evidence derived from the terms of relationship, other lines of reasoning indicate the former wide prevalence of communal marriage. Sir J. Lubbock accounts¹ for the strange

¹ Address to British Association, "On the Social and Religious Condition of the Lower Races of Man," 1870, p. 20.

and widely extended habit of exogamy — that is, the men of one tribe taking wives from a distinct tribe — by communism having been the original form of intercourse; so that a man never obtained a wife for himself unless he captured her from a neighboring and hostile tribe, and then she would naturally have become his sole and valuable property. Thus the practice of capturing wives might have arisen; and from the honor so gained it might ultimately have become the universal habit. According to Sir J. Lubbock, we can also thus understand “the necessity of expiation for marriage as an infringement of tribal rites, since, according to old ideas, a man had no right to appropriate to himself that which belonged to the whole tribe.” Sir J. Lubbock further gives a curious body of facts, showing that in old times high honor was bestowed on women who were utterly licentious; and this, as he explains, is intelligible, if we admit that promiscuous intercourse was the aboriginal and, therefore, long revered custom of the tribe.¹

Although the manner of development of the marriage tie is an obscure subject, as we may infer from the divergent opinions on several points between the three authors who have studied it most closely, namely, Mr. Morgan, Mr. M'Lennan, and Sir J. Lubbock, yet from the foregoing and several other lines of evidence it seems probable² that the habit of marriage, in any strict sense of the word, has been gradually developed, and that almost promiscuous or very loose intercourse was once extremely common throughout the world. Nevertheless, from the strength of the feeling of jealousy all through the animal kingdom, as well as from the analogy of the lower animals, more particularly of those which come nearest to man, I cannot believe that absolutely promiscuous intercourse prevailed in times past, shortly before man attained to his present rank in the zoölogical scale. Man,

¹ Origin of Civilization, 1870, p. 86. In the several works above quoted there will be found copious evidence on relationship through the females alone, or with the tribe alone.

² Mr. C. Staniland Wake argues strongly (*Anthropologia*, March, 1874, p. 197) against the views held by these three writers on the former prevalence of almost promiscuous intercourse; and he thinks that the classificatory system of relationship can be otherwise explained.

as I have attempted to show, is certainly descended from some apelike creature. With the existing *Quadrumanus*, as far as their habits are known, the males of some species are monogamous, but live during only a part of the year with the females; of this the orang seems to afford an instance. Several kinds, for example, some of the Indian and American monkeys, are strictly monogamous, and associate all the year around with their wives. Others are polygamous, for example, the gorilla and several American species, and each family lives separate. Even when this occurs, the families inhabiting the same district are probably somewhat social; the chimpanzee, for instance, is occasionally met with in large bands. Again, other species are polygamous, but several males, each with his own females, live associated in a body, as with several species of baboons.¹ We may indeed conclude, from what we know of the jealousy of all male quadrupeds, armed as many of them are with special weapons for battling with their rivals, that promiscuous intercourse in a state of nature is extremely improbable. The pairing may not last for life, but only for each birth; yet if the males which are the strongest and best able to defend or otherwise assist their females and young were to select the more attractive females, this would suffice for sexual selection.

Therefore, looking far enough back in the stream of time, and judging from the social habits of man as he now exists, the most probable view is that he aboriginally lived in small communities, each with a single wife, or if powerful with several, whom he jealously guarded against all other men. Or he may not have been a social animal, and yet have lived with several wives, like the gorilla; for all the natives "agree that but one adult male is seen in a band; when the young male grows up a contest takes place for mastery, and the strongest, by killing and driving out the others, establishes himself as the head of the community."²

¹ Brehm (Illust. Thierleben, B. I, p. 77) says *Cynocephalus hamadryas* lives in great troops containing twice as many adult females as adult males. See Rengger on American polygamous species, and Owen (Anatomy of Vertebrates, Vol. III, p. 746) on American monogamous species. Other references might be added.

² Dr. Savage, in *Boston Journal of Natural History*, 1845-1847, Vol. V, p. 423.

The younger males, being thus expelled and wandering about, would, when at last successful in finding a partner, prevent too close interbreeding within the limits of the same family.

Although savages are now extremely licentious, and although communal marriages may formerly have largely prevailed, yet many tribes practice some form of marriage, but of a far more lax nature than that of civilized nations. Polygamy, as just stated, is almost universally followed by the leading men in every tribe. Nevertheless there are tribes standing almost at the bottom of the scale which are strictly monogamous. This is the case with the Veddahs of Ceylon; they have a saying, according to Sir J. Lubbock,¹ "that death alone can separate husband and wife." An intelligent Kandyan chief, of course a polygamist, "was perfectly scandalized at the utter barbarism of living with only one wife, and never parting until separated by death." It was, he said, "just like the Wanderoo monkeys." Whether savages who now enter into some form of marriage, either polygamous or monogamous, have retained this habit from primeval times, or whether they have returned to some form of marriage after passing through a stage of promiscuous intercourse, I will not pretend to conjecture.

Infanticide

This practice is now very common throughout the world, and there is reason to believe that it prevailed much more extensively during former times.² Barbarians find it difficult to support themselves and their children, and it is a simple plan to kill their infants. In South America some tribes, according to Azara, formerly destroyed so many infants of both sexes that they were on the point of extinction. In the Polynesian Islands women have been known to kill from four or five to even ten of their children; and Ellis could not find a single woman who had not killed at least one. Wherever infanticide prevails the struggle for existence will be in so far less severe, and all the members of the tribe will have an almost equally good chance of rearing their

¹ Prehistoric Times, 1869, p. 424.

² Mr. M'Lennan, Primitive Marriage, 1865. See especially on exogamy and infanticide, *ibid.*, pp. 130, 138, 165.

few surviving children. In most cases a larger number of female than of male infants are destroyed, for it is obvious that the latter are of more value to the tribe, as they will, when grown up, aid in defending it, and can support themselves. But the trouble experienced by the women in rearing children, their consequent loss of beauty, the higher estimation set on them when few, and their happier fate, are assigned by the women themselves and by various observers as additional motives for infanticide. In Australia, where female infanticide is still common, Sir G. Grey estimated the proportion of native women to men as one to three; but others say as two to three. In a village on the eastern frontier of India, Colonel McCulloch found not a single female child.¹

When, owing to female infanticide, the women of a tribe were few, the habit of capturing wives from neighboring tribes would naturally arise. Sir J. Lubbock, however, as we have seen, attributes the practice, in chief part, to the former existence of communal marriage, and to the men having consequently captured women from other tribes to hold as their sole property. Additional causes might be assigned, such as the communities being very small, in which case marriageable women would often be deficient. That the habit was most extensively practiced during former times, even by the ancestors of civilized nations, is clearly shown by the preservation of many curious customs and ceremonies, of which Mr. M'Lennan has given an interesting account. In our own marriages the "best man" seems originally to have been the chief abettor of the bridegroom in the act of capture. Now as long as men habitually procured their wives through violence and craft, they would have been glad to seize on any woman, and would not have selected the more attractive ones. But as soon as the practice of procuring wives from a distinct tribe was effected through barter, as now occurs in many places, the more attractive women would generally have been purchased.

¹ Dr. Gerland (*Ueber das Aussterben der Naturvölker*, 1868) has collected much information on infanticide. See especially *ibid.*, s. 27, 51, 54. Azara (*Voyages*, etc., Tome II, pp. 94, 116) enters in detail on the motives. See also M'Lennan (*Primitive Marriage*, p. 139) for cases in India.

The incessant crossing, however, between tribe and tribe, which necessarily follows from any form of this habit, would tend to keep all the people inhabiting the same country nearly uniform in character, and this would interfere with the power of sexual selection in differentiating the tribes.

The scarcity of women consequent on female infanticide leads also to another practice, that of polyandry, still common in several parts of the world, and which formerly, as Mr. M'Lennan believes, prevailed almost universally; but this latter conclusion is doubted by Mr. Morgan and Sir J. Lubbock.¹ Whenever two or more men are compelled to marry one woman, it is certain that all the women of the tribe will get married, and there will be no selection by the men of the more attractive women. But under these circumstances the women no doubt will have the power of choice, and will prefer the more attractive men. Azara, for instance, describes how carefully a Guana woman bargains for all sorts of privileges before accepting some one or more husbands; and the men in consequence take unusual care of their personal appearance. So among the Todas of India, who practice polyandry, the girls can accept or refuse any man.² A very ugly man in these cases would perhaps altogether fail in getting a wife, or get one later in life; but the handsomer men, although more successful in obtaining wives, would not, as far as we can see, leave more offspring to inherit their beauty than the less handsome husbands of the same women.

Early Betrothals and Slavery of Women

With many savages it is the custom to betroth the females while mere infants; and this would effectually prevent preference being exerted on either side, according to personal appearance. But it would not prevent the more attractive women from being afterward stolen or taken by force from their husbands by the more powerful men; and this often happens in Australia,

¹ Primitive Marriage, p. 208; Sir J. Lubbock, *Origin of Civilization*, p. 100. See also Mr. Morgan, *loc. cit.*, on the former prevalence of polyandry.

² Azara, *Voyages, etc.*, Tome II, pp. 92-95; Colonel Marshall, *Among the Todas*, p. 212.

America, and elsewhere. The same consequences with reference to sexual selection would to a certain extent follow when women are valued almost solely as slaves or beasts of burden, as is the case with many savages. The men, however, at all times, would prefer the handsomest slaves, according to their standard of beauty.

We thus see that several customs prevail with savages which must greatly interfere with, or completely stop, the action of sexual selection. On the other hand, the conditions of life to which savages are exposed, and some of their habits, are favorable to natural selection; and this comes into play at the same time with sexual selection. Savages are known to suffer severely from recurrent famines; they do not increase their food by artificial means; they rarely refrain from marriage,¹ and generally marry while young. Consequently they must be subjected to occasional hard struggles for existence, and the favored individuals will alone survive.

At a very early period, before man attained to his present rank in the scale, many of his conditions would be different from what now obtain among savages. Judging from the analogy of the lower animals, he would then either live with a single female or be a polygamist. The most powerful and able males would succeed best in obtaining attractive females. They would also succeed best in the general struggle for life, and in defending their females, as well as their offspring, from enemies of all kinds. At this early period the ancestors of man would not be sufficiently advanced in intellect to look forward to distant contingencies; they would not foresee that the rearing of all their children, especially their female children, would make the struggle for life severer for the tribe. They would be governed more by their instincts and less by their reason than are savages at the present day. They would not at that period have partially lost one of the strongest of all instincts, common to all the lower animals,

¹ Burchell says (*Travels in South Africa*, 1824, Vol. II, p. 58) that among the wild nations of southern Africa neither men nor women ever pass their lives in a state of celibacy. Azara (*Voyages dans l'Amérique Méridien*, Tome II, 1809, p. 21) makes precisely the same remark in regard to the wild Indians of South America.

namely, the love of their young offspring; and consequently they would not have practiced female infanticide. Women would not have been thus rendered scarce, and polyandry would not have been practiced; for hardly any other cause, except the scarcity of women, seems sufficient to break down the natural and widely prevalent feeling of jealousy, and the desire of each male to possess a female for himself. Polyandry would be a natural stepping-stone to communal marriages or almost promiscuous intercourse, though the best authorities believe that this latter habit preceded polyandry. During primordial times there would be no early betrothals, for this implies foresight. Nor would women be valued merely as useful slaves or beasts of burden. Both sexes, if the females as well as the males were permitted to exert any choice, would choose their partners not for mental charms or property or social position, but almost solely from external appearance. All the adults would marry or pair, and all the offspring, as far as that was possible, would be reared, so that the struggle for existence would be periodically excessively severe. Thus during these times all the conditions for sexual selection would have been more favorable than at a later period, when man had advanced in his intellectual powers but had retrograded in his instincts. Therefore, whatever influence sexual selection may have had in producing the differences between the races of man, and between man and the higher Quadrumana, this influence would have been more powerful at a remote period than at the present day, though probably not yet wholly lost.

The Manner of Action of Sexual Selection with Mankind

With primeval men under the favorable conditions just stated, and with those savages who at the present time enter into any marriage tie, sexual selection has probably acted in the following manner, subject to greater or less interference from female infanticide, early betrothals, etc. The strongest and most vigorous men—those who could best defend and hunt for their families, who were provided with the best weapons and possessed the most property, such as a large number of dogs or other animals,

— would succeed in rearing a greater average number of offspring than the weaker and poorer members of the same tribes. There can also be no doubt that such men would generally be able to select the more attractive women. At present the chiefs of nearly every tribe throughout the world succeed in obtaining more than one wife. I hear from Mr. Mantell, that until recently almost every girl in New Zealand, who was pretty or promised to be pretty, was *tapu* to some chief. With the Kafirs, as Mr. C. Hamilton states,¹ “the chiefs generally have the pick of the women for many miles round, and are most persevering in establishing or confirming their privilege.” We have seen that each race has its own style of beauty, and we know that it is natural to man to admire each characteristic point in his domestic animals, dress, ornaments, and personal appearance, when carried a little beyond the average. If, then, the several foregoing propositions be admitted, — and I cannot see that they are doubtful, — it would be an inexplicable circumstance, if the selection of the more attractive women by the more powerful men of each tribe, who would rear on an average a greater number of children, did not after the lapse of many generations somewhat modify the character of the tribe.

When a foreign breed of our domestic animals is introduced into a new country, or when a native breed is long and carefully attended to, either for use or ornament, it is found after several generations to have undergone a greater or less amount of change, whenever the means of comparison exist. This follows from unconscious selection during a long series of generations — that is, the preservation of the most approved individuals — without any wish or expectation of such a result on the part of the breeder. So again, if during many years two careful breeders rear animals of the same family, and do not compare them together or with a common standard, the animals are found to have become, to the surprise of their owners, slightly different.² Each breeder has impressed, as Von Nathusius well expresses it,

¹ *Anthropological Review*, January, 1870, p. xvi.

² *The Variation of Animals and Plants under Domestication*, Vol. II, pp. 210–217.

the character of his own mind — his own taste and judgment — on his animals. What reason, then, can be assigned why similar results should not follow from the long-continued selection of the most admired women by those men of each tribe who were able to rear the greatest number of children? This would be unconscious selection, for an effect would be produced, independently of any wish or expectation on the part of the men who preferred certain women to others.

Let us suppose the members of a tribe, practicing some form of marriage, to spread over an unoccupied continent; they would soon split up into distinct hordes, separated from each other by various barriers, and still more effectually by the incessant wars between all barbarous nations. The hordes would thus be exposed to slightly different conditions and habits of life, and would sooner or later come to differ in some small degree. As soon as this occurred, each isolated tribe would form for itself a slightly different standard of beauty;¹ and then unconscious selection would come into action through the more powerful and leading men preferring certain women to others. Thus the differences between the tribes, at first very slight, would gradually and inevitably be more or less increased.

With animals in a state of nature, many characters proper to the males, such as size, strength, special weapons, courage, and pugnacity, have been acquired through the law of battle. The semihuman progenitors of man, like their allies the *Quadrumana*, will almost certainly have been thus modified; and as savages still fight for the possession of their women, a similar process of selection has probably gone on in a greater or less degree to the present day. Other characters proper to the males of the lower animals, such as bright colors and various ornaments, have been acquired by the more attractive males having been preferred by the females. There are, however, exceptional cases in which the males are the selectors, instead of having been the selected. We

¹ An ingenious writer argues, from a comparison of the pictures of Raphael, Rubens, and modern French artists, that the idea of beauty is not absolutely the same even throughout Europe. See the *Lives of Haydn and Mozart*, by Bombet (otherwise M. Beyle), English translation, p. 278.

recognize such cases by the females being more highly ornamented than the males, — their ornamental characters having been transmitted exclusively or chiefly to their female offspring. One such case has been described in the order to which man belongs, that of the rhesus monkey.

Man is more powerful in body and mind than woman, and in the savage state he keeps her in a far more abject state of bondage than does the male of any other animal; therefore it is not surprising that he should have gained the power of selection. Women are everywhere conscious of the value of their own beauty; and when they have the means, they take more delight in decorating themselves with all sorts of ornaments than do men. They borrow the plumes of male birds, with which nature has decked this sex in order to charm the females. As women have long been selected for beauty, it is not surprising that some of their successive variations should have been transmitted exclusively to the same sex; consequently that they should have transmitted beauty in a somewhat higher degree to their female than to their male offspring, and thus have become more beautiful, according to general opinion, than men. Women, however, certainly transmit most of their characters, including some beauty, to their offspring of both sexes, so that the continued preference by the men of each race for the more attractive women, according to their standard of taste, will have tended to modify in the same manner all the individuals of both sexes belonging to the race.

With respect to the other form of sexual selection (which with the lower animals is much the more common), namely, when the females are the selectors, and accept only those males which excite or charm them most, we have reason to believe that it formerly acted on our progenitors. Man in all probability owes his beard, and perhaps some other characters, to inheritance from an ancient progenitor who thus gained his ornaments. But this form of selection may have occasionally acted during later times; for in utterly barbarous tribes the women have more power in choosing, rejecting, and tempting their lovers, or of afterward changing their husbands, than might have been expected. As

this is a point of some importance, I will give in detail such evidence as I have collected.

Hearne describes how a woman in one of the tribes of Arctic America repeatedly ran away from her husband and joined her lover; and with the Charruas of South America, according to Azara, divorce is quite optional. Among the Abipones, a man on choosing a wife bargains with the parents about the price. But "it frequently happens that the girl rescinds what has been agreed upon between the parents and the bridegroom, obstinately rejecting the very mention of marriage." She often runs away, hides herself, and thus eludes the bridegroom. Captain Musters, who lived with the Patagonians, says that their marriages are always settled by inclination; "if the parents make a match contrary to the daughter's will, she refuses and is never compelled to comply." In Tierra del Fuego a young man first obtains the consent of the parents by doing them some service, and then he attempts to carry off the girl; "but if she is unwilling, she hides herself in the woods until her admirer is heartily tired of looking for her, and gives up the pursuit; but this seldom happens." In the Fiji Islands the man seizes on the woman whom he wishes for his wife by actual or pretended force; but "on reaching the home of her abductor, should she not approve of the match, she runs to some one who can protect her; if, however, she is satisfied, the matter is settled forthwith." With the Kalmucks there is a regular race between the bride and bridegroom, the former having a fair start; and Clarke "was assured that no instance occurs of a girl being caught, unless she has a partiality to the pursuer." Among the wild tribes of the Malay Archipelago there is also a racing match; and it appears from M. Bourien's account, as Sir J. Lubbock remarks, that "the race 'is not to the swift, nor the battle to the strong,' but to the young man who has the good fortune to please his intended bride." A similar custom, with the same result, prevails with the Koraks of north-eastern Asia.

Turning to Africa: the Kafirs buy their wives, and girls are severely beaten by their fathers if they will not accept a chosen husband; but it is manifest from many facts given by the Rev.

Mr. Shooter, that they have considerable power of choice. Thus, very ugly though rich men have been known to fail in getting wives. The girls, before consenting to be betrothed, compel the men to show themselves off first in front and then behind, and "exhibit their paces." They have been known to propose to a man, and they not rarely run away with a favored lover. So again, Mr. Leslie, who was intimately acquainted with the Kafirs, says, "It is a mistake to imagine that a girl is sold by her father in the same manner, and with the same authority, with which he would dispose of a cow." Among the degraded Bushmen of South Africa, "when a girl has grown up to womanhood without having been betrothed, which, however, does not often happen, her lover must gain her approbation, as well as that of the parents."¹ Mr. Winwood Reade made inquiries for me with respect to the negroes of western Africa, and he informs me that "the women, at least among the more intelligent pagan tribes, have no difficulty in getting the husbands whom they may desire, although it is considered unwomanly to ask a man to marry them. They are quite capable of falling in love, and of forming tender, passionate, and faithful attachments." Additional cases could be given.

We thus see that with savages the women are not in quite so abject a state in relation to marriage as has often been supposed. They can tempt the men whom they prefer, and can sometimes reject those whom they dislike, either before or after marriage. Preference on the part of the women, steadily acting in any one direction, would ultimately affect the character of the tribe; for the women would generally choose not merely the handsomest

¹ Azara, *Voyages*, etc., Tome II, p. 23. Dobrizhoffer, *An Account of the Abipones*, 1822, Vol. II, p. 207. Captain Musters, in *Proceedings Royal Geographical Society*, Vol. XV, p. 47. Williams on the Fiji Islanders, as quoted by Lubbock in *Origin of Civilization*, 1870, p. 79. On the Fuegians, see King and FitzRoy, *Voyages of the Adventure and Beagle*, 1839, Vol. II, p. 182. On the Kalmucks, quoted by M'Lennan in *Primitive Marriage*, 1865, p. 32. On the Malays, see Lubbock, *Origin of Civilization*, p. 76. The Rev. J. Shooter, *On the Kafirs of Natal*, 1857, pp. 52-60. Mr. D. Leslie, *Kafir Character and Customs*, 1871, p. 4. On the Bushmen, Burchell, *Travels in South Africa*, 1824, Vol. II, p. 59. On the Koraks by McKennan, as quoted by Mr. Wake, in *Anthropologia*, October, 1873, p. 75.

men, according to their standard of taste, but those who were at the same time best able to defend and support them. Such well-endowed pairs would commonly rear a larger number of offspring than the less favored. The same result would obviously follow in a still more marked manner, if there was selection on both sides; that is, if the more attractive and, at the same time, more powerful men were to prefer, and were preferred by, the more attractive women. And this double form of selection seems actually to have occurred, especially during the earlier periods of our long history.

We will now examine a little more closely some of the characters which distinguish the several races of man from one another and from the lower animals, namely, the greater or less deficiency of hair on the body, and the color of the skin. We need say nothing about the great diversity in the shape of the features and of the skull between the different races, as we have seen already how different is the standard of beauty in these respects. These characters will therefore probably have been acted on through sexual selection; but we have no means of judging whether they have been acted on chiefly from the male or female side. The musical faculties of man have likewise been already discussed.

*Absence of Hair on the Body, and its Development on the Face
and Head*

From the presence of the woolly hair or lanugo on the human foetus, and of rudimentary hairs scattered over the body during maturity, we may infer that man is descended from some animal which was born hairy and remained so during life. The loss of hair is an inconvenience and probably an injury to man, even in a hot climate, for he is thus exposed to the scorching of the sun, and to sudden chills, especially during wet weather. As Mr. Wallace remarks, the natives in all countries are glad to protect their naked backs and shoulders with some slight covering. No one supposes that the nakedness of the skin is any direct advantage to man; his body therefore cannot have been divested of

hair through natural selection.¹ Nor have we any evidence that this can be due to the direct action of climate, or that it is the result of correlated development.

The absence of hair on the body is to a certain extent a secondary sexual character; for in all parts of the world women are less hairy than men. Therefore we may reasonably suspect that this character has been gained through sexual selection. We know that the faces of several species of monkeys and large surfaces at the posterior end of the body of other species have been denuded of hair; and this we may safely attribute to sexual selection, for these surfaces are not only vividly colored but sometimes, as with the male mandrill and female rhesus, much more vividly in the one sex than in the other, especially during the breeding season. I am informed by Mr. Bartlett that, as these animals gradually reach maturity, the naked surfaces grow larger compared with the size of their bodies. The hair, however, appears to have been removed, not for the sake of nudity but that the color of the skin may be more fully displayed. So again with many birds, it appears as if the head and neck had been divested of feathers through sexual selection, to exhibit the brightly colored skin.

As the body in woman is less hairy than in man, and as this character is common to all races, we may conclude that it was our female semihuman ancestors who were first divested of hair, and that this occurred at an extremely remote period before the several races had diverged from a common stock. While our female ancestors were gradually acquiring this new character of nudity, they must have transmitted it almost equally to their offspring of both sexes while young, so that its transmission, as with the ornaments of many mammals and birds, has not been

¹ Contributions to the Theory of Natural Selection, 1870, p. 346. Mr. Wallace believes (p. 350) "that some intelligent power has guided or determined the development of man"; and he considers the hairless condition of the skin as coming under this head. The Rev. T. R. Stebbing, in commenting on this view (*Transactions of Devonshire Association for Science*, 1870), remarks that had Mr. Wallace "employed his usual ingenuity on the question of man's hairless skin, he might have seen the possibility of its selection through its superior beauty or the health attaching to superior cleanliness."

limited either by sex or age. There is nothing surprising in a partial loss of hair having been esteemed as an ornament by our apelike progenitors, for we have seen that innumerable strange characters have been thus esteemed by animals of all kinds, and have consequently been gained through sexual selection. Nor is it surprising that a slightly injurious character should have been thus acquired; for we know that this is the case with the plumes of certain birds, and with the horns of certain stags.

The females of some of the anthropoid apes are somewhat less hairy on the under surface than the males; and here we have what might have afforded a commencement for the process of denudation. With respect to the completion of the process through sexual selection, it is well to bear in mind the New Zealand proverb, "There is no woman for a hairy man." All who have seen photographs of the Siamese hairy family will admit how ludicrously hideous is the opposite extreme of excessive hairiness. And the king of Siam had to bribe a man to marry the first hairy woman in the family; and she transmitted this character to her young offspring of both sexes.¹

Some races are much more hairy than others, especially the males; but it must not be assumed that the more hairy races, such as the European, have retained their primordial condition more completely than the naked races, such as the Kalmucks or Americans. It is more probable that the hairiness of the former is due to partial reversion; for characters which have been at some former period long inherited are always apt to return. We have seen that idiots are often very hairy, and they are apt to revert in other characters to a lower animal type. It does not appear that a cold climate has been influential in leading to this kind of reversion, excepting perhaps with the negroes, who have been reared during several generations in the United States,² and possibly with the Ainos, who inhabit the northern islands of

¹ *The Variation of Animals and Plants under Domestication*, 1868, Vol. II, p. 327.

² *Investigations into Military and Anthropological Statistics of American Soldiers*, by B. A. Gould, 1869, p. 568: Observations were carefully made on the hairiness of 2129 black and colored soldiers while they were bathing; and by

the Japan Archipelago. But the laws of inheritance are so complex that we can seldom understand their action. If the greater hairiness of certain races be the result of reversion, unchecked by any form of selection, its extreme variability, even within the limits of the same race, ceases to be remarkable.¹

With respect to the beard in man, if we turn to our best guide, the *Quadrumana*, we find beards equally developed in both sexes of many species, but in some, either confined to the males, or more developed in them than in the females. From this fact and from the curious arrangement, as well as the bright colors of the hair about the heads of many monkeys, it is highly probable, as before explained, that the males first acquired their beards through sexual selection as an ornament, transmitting them in most cases equally, or nearly so, to their offspring of both sexes. We know from Eschricht² that with mankind the female as well as male fetus is furnished with much hair on the face, especially round the mouth; and this indicates that we are descended from progenitors of whom both sexes were bearded. It appears, therefore, at first sight probable that man has retained his beard from a very early period, while woman lost her beard at the same time that her body became almost completely divested of hair. Even the color of our beards seems to have been inherited from an apelike progenitor; for when there is any difference in tint between the hair of the head and the beard, the latter is lighter

looking to the published table, "it is manifest at a glance that there is but little, if any, difference between the white and the black races in this respect." It is, however, certain that negroes in their native and much hotter land of Africa have remarkably smooth bodies. It should be particularly observed that both pure blacks and mulattoes were included in the above enumeration; and this is an unfortunate circumstance, as in accordance with a principle, the truth of which I have elsewhere proved, crossed races of man would be eminently liable to revert to the primordial hairy character of their early apelike progenitors.

¹ Hardly any view advanced in this work has met with so much disfavor (see, for instance, Spengel, *Die Fortschritte des Darwinismus*, 1874, p. 80) as the above explanation of the loss of hair in mankind through sexual selection; but none of the opposed arguments seem to me of much weight, in comparison with the facts showing that the nudity of the skin is to a certain extent a secondary sexual character in man and in some of the *Quadrumana*.

² "Ueber die Richtung der Haare am Menschlichen Körper," in *Müller's Archiv für Anat. und Phys.*, 1837, s. 40.

colored in all monkeys and in man. In those *Quadrumana* in which the male has a larger beard than that of the female, it is fully developed only at maturity, just as with mankind; and it is possible that only the later stages of development have been retained by man. In opposition to this view of the retention of the beard from an early period is the fact of its great variability in different races, and even within the same race; for this indicates reversion, long-lost characters being very apt to vary on reappearance.

Nor must we overlook the part which sexual selection may have played in later times; for we know that with savages the men of the beardless races take infinite pains in eradicating every hair from their faces as something odious, while the men of the bearded races feel the greatest pride in their beards. The women, no doubt, participate in these feelings, and if so, sexual selection can hardly have failed to have effected something in the course of later times. It is also possible that the long-continued habit of eradicating the hair may have produced an inherited effect. Dr. Brown-Séquard has shown that if certain animals are operated on in a particular manner, their offspring are affected. Further evidence could be given of the inheritance of the effects of mutilations; but a fact lately ascertained by Mr. Salvin¹ has a more direct bearing on the present question; for he has shown that the motmots, which are known habitually to bite off the barbs of the two central tail feathers, have the barbs of these feathers naturally somewhat reduced.² Nevertheless, with mankind, the habit of eradicating the beard and the hairs on the body would probably not have arisen until these had already become by some means reduced.

It is difficult to form any judgment as to how the hair on the head became developed to its present great length in many races. Eschricht³ states that in the human fetus the hair on the face during the fifth month is longer than that on the head; and this

¹ "On the Tail Feathers of *Momotus*," in *Proc. Zoölog. Soc.*, 1873, p. 429.

² Mr. Sproat has suggested (*Scenes and Studies of Savage Life*, 1868, p. 25) this same view. Some distinguished ethnologists, among others M. Gosse of Geneva, believe that artificial modifications of the skull tend to be inherited.

³ "Ueber die Richtung, etc.," in *Müller's Archiv für Anat. und Phys.*, 1837, s. 40.

indicates that our semihuman progenitors were not furnished with long tresses, which must therefore have been a late acquisition. This is likewise indicated by the extraordinary difference in the length of the hair in the different races; in the negro the hair forms a mere curly mat; with us it is of great length, and with the American natives it not rarely reaches to the ground. Some species of *Semnopithecus* have their heads covered with moderately long hair, and this probably serves as an ornament and was acquired through sexual selection. The same view may perhaps be extended to mankind, for we know that long tresses are now and were formerly much admired, as may be observed in the works of almost every poet. St. Paul says, "If a woman have long hair, it is a glory to her"; and we have seen that in North America a chief was elected solely from the length of his hair.

Color of the Skin

The best kind of evidence that in man the color of the skin has been modified through sexual selection is scanty; for in most races the sexes do not differ in this respect, and only slightly, as we have seen, in others. We know, however, from the many facts already given, that the color of the skin is regarded by the men of all races as a highly important element in their beauty, so that it is a character which would be likely to have been modified through selection, as has occurred in innumerable instances with the lower animals. It seems at first sight a monstrous supposition that the jet blackness of the negro should have been gained through sexual selection; but this view is supported by various analogies, and we know that negroes admire their own color. With mammals, when the sexes differ in color, the male is often black or much darker than the female, and it depends merely on the form of inheritance whether this or any other tint is transmitted to both sexes or to one alone. The resemblance to a negro in miniature of *Pithecia satanas*, with his jet-black skin, white rolling eyeballs, and hair parted on the top of the head, is almost ludicrous.

The color of the face differs much more widely in the various kinds of monkeys than it does in the races of man ; and we have some reason to believe that the red, blue, orange, almost white and black tints of their skin, even when common to both sexes, as well as the bright colors of their fur, and the ornamental tufts about the head, have all been acquired through sexual selection. As the order of development during growth generally indicates the order in which the characters of a species have been developed and modified during previous generations, and as the newly born infants of the various races of man do not differ nearly as much in color as do the adults, although their bodies are as completely destitute of hair, we have some slight evidence that the tints of the different races were acquired at a period subsequent to the removal of the hair, which must have occurred at a very early period in the history of man.

Summary

We may conclude that the greater size, strength, courage, pugnacity, and energy of man, in comparison with woman, were acquired during primeval times, and have subsequently been augmented, chiefly through the contests of rival males for the possession of the females. The greater intellectual vigor and power of invention in man is probably due to natural selection, combined with the inherited effects of habit, for the most able men will have succeeded best in defending and providing for themselves and for their wives and offspring. As far as the extreme intricacy of the subject permits us to judge, it appears that our male apelike progenitors acquired their beards as an ornament to charm or excite the opposite sex, and transmitted them only to their male offspring. The females apparently first had their bodies denuded of hair, also as a sexual ornament ; but they transmitted this character almost equally to both sexes. It is not improbable that the females were modified in other respects for the same purpose and by the same means, so that women have acquired sweeter voices and become more beautiful than men.

It deserves attention that with mankind the conditions were in many respects much more favorable for sexual selection, during

a very early period, when man had only just attained to the rank of manhood, than during later times. For he would then, as we may safely conclude, have been guided more by his instinctive passions, and less by foresight or reason. He would have jealously guarded his wife or wives. He would not have practiced infanticide, nor valued his wives merely as useful slaves, nor have been betrothed to them during infancy. Hence we may infer that the races of men were differentiated, as far as sexual selection is concerned, in chief part at a very remote epoch; and this conclusion throws light on the remarkable fact that at the most ancient period of which we have as yet any record the races of man had already come to differ nearly or quite as much as they do at the present day.

The views here advanced, on the part which sexual selection has played in the history of man, want scientific precision. He who does not admit this agency in the case of the lower animals will disregard all that I have written in the later chapters on man. We cannot positively say that this character, but not that, has been thus modified; it has, however, been shown that the races of man differ from each other and from their nearest allies in certain characters which are of no service to them in their daily habits of life, and which it is extremely probable would have been modified through sexual selection. We have seen that with the lowest savages the people of each tribe admire their own characteristic qualities, — the shape of the head and face, the squareness of the cheek bones, the prominence or depression of the nose, the color of the skin, the length of the hair on the head, the absence of hair on the face and body, or the presence of a great beard. Hence these and other such points could hardly fail to be slowly and gradually exaggerated, from the more powerful and able men in each tribe, who would succeed in rearing the largest number of offspring, having selected during many generations for their wives the most strongly characterized and therefore most attractive women. I conclude that of all the causes which have led to the differences in external appearance between the races of man, and to a certain extent between man and the lower animals, sexual selection has been the most efficient.

General Summary and Conclusion

A brief summary will be sufficient to recall to the reader's mind the more salient points in this work. Many of the views which have been advanced are highly speculative, and some no doubt will prove erroneous; but I have in every case given the reasons which have led me to one view rather than to another. It seemed worth while to try how far the principle of evolution would throw light on some of the more complex problems in the natural history of man. False facts are highly injurious to the progress of science, for they often endure long; but false views, if supported by some evidence, do little harm, for every one takes a salutary pleasure in proving their falseness; and when this is done one path toward error is closed and the road to truth is often at the same time opened.

The main conclusion here arrived at, and now held by many naturalists who are well competent to form a sound judgment, is that man is descended from some less highly organized form. The grounds upon which this conclusion rests will never be shaken, for the close similarity between man and the lower animals in embryonic development, as well as in innumerable points of structure and constitution, both of high and of the most trifling importance,—the rudiments which he retains, and the abnormal reversions to which he is occasionally liable,—are facts which cannot be disputed. They have long been known, but until recently they told us nothing with respect to the origin of man. Now when viewed by the light of our knowledge of the whole organic world, their meaning is unmistakable. The great principle of evolution stands up clear and firm, when these groups of facts are considered in connection with others, such as the mutual affinities of the members of the same group, their geographical distribution in past and present times, and their geological succession. It is incredible that all these facts should speak falsely. He who is not content to look, like a savage, at the phenomena of nature as disconnected, cannot any longer believe that man is the work of a separate act of creation. He will be forced to admit that the close resemblance of the embryo

of man to that, for instance, of a dog; the construction of his skull, limbs, and whole frame on the same plan with that of other mammals, independently of the uses to which the parts may be put; the occasional reappearance of various structures, for instance of several muscles, which man does not normally possess, but which are common to the *Quadrumana*; and a crowd of analogous facts, — all point in the plainest manner to the conclusion that man is the codescendant with other mammals of a common progenitor.

We have seen that man incessantly presents individual differences in all parts of his body and in his mental faculties. These differences or variations seem to be induced by the same general causes and to obey the same laws as with the lower animals. In both cases similar laws of inheritance prevail. Man tends to increase at a greater rate than his means of subsistence; consequently he is occasionally subjected to a severe struggle for existence, and natural selection will have effected whatever lies within its scope. A succession of strongly marked variations of a similar nature is by no means requisite; slight fluctuating differences in the individual suffice for the work of natural selection, not that we have any reason to suppose that in the same species all parts of the organization tend to vary to the same degree. We may feel assured that the inherited effects of the long-continued use or disuse of parts will have done much in the same direction with natural selection. Modifications formerly of importance, though no longer of any special use, are long inherited. When one part is modified, other parts change through the principle of correlation, of which we have instances in many curious cases of correlated monstrosities. Something may be attributed to the direct and definite action of the surrounding conditions of life, such as abundant food, heat, or moisture; and lastly, many characters of slight physiological importance, some indeed of considerable importance, have been gained through sexual selection.

No doubt man, as well as every other animal, presents structures which seem to our limited knowledge not to be now of any service to him, nor to have been so formerly, either for the

general conditions of life, or in the relations of one sex to the other. Such structures cannot be accounted for by any form of selection, or by the inherited effects of the use and disuse of parts. We know, however, that many strange and strongly marked peculiarities of structure occasionally appear in our domesticated productions, and if their unknown causes were to act more uniformly, they would probably become common to all the individuals of the species. We may hope hereafter to understand something about the causes of such occasional modifications, especially through the study of monstrosities; hence the labors of experimentalists, such as those of M. Camille Dareste, are full of promise for the future. In general, we can only say that the cause of each slight variation and of each monstrosity lies much more in the constitution of the organism than in the nature of the surrounding conditions, though new and changed conditions certainly play an important part in exciting organic changes of many kinds.

Through the means just specified, aided perhaps by others as yet undiscovered, man has been raised to his present state. But since he attained to the rank of manhood, he has diverged into distinct races, or as they may be more fitly called, subspecies. Some of these, such as the negro and European, are so distinct that, if specimens had been brought to a naturalist without any further information, they would undoubtedly have been considered by him as good and true species. Nevertheless, all the races agree in so many unimportant details of structure and in so many mental peculiarities that these can be accounted for only by inheritance from a common progenitor; and a progenitor thus characterized would probably deserve to rank as man.

It must not be supposed that the divergence of each race from the other races, and of all from a common stock, can be traced back to any one pair of progenitors. On the contrary, at every stage in the process of modification, all the individuals which were in any way better fitted for their conditions of life, though in different degrees, would have survived in greater numbers than the less well fitted. The process would have been like that followed by man, when he does not intentionally select particular

individuals, but breeds from all the superior individuals and neglects the inferior. He thus slowly but surely modifies his stock and unconsciously forms a new strain. So with respect to modifications acquired independently of selection and due to variations arising from the nature of the organism and the action of the surrounding conditions, or from changed habits of life, no single pair will have been modified much more than the other pairs inhabiting the same country, for all will have been continually blended through free intercrossing.

By considering the embryological structure of man, the homologies which he presents with the lower animals, the rudiments which he retains, and the reversions to which he is liable, we can partly recall in imagination the former condition of our early progenitors, and can approximately place them in their proper place in the zoölogical series. We thus learn that man is descended from a hairy, tailed quadruped, probably arboreal in its habits, and an inhabitant of the Old World. This creature, if its whole structure had been examined by a naturalist, would have been classed among the *Quadrumana* as surely as the still more ancient progenitor of the Old and New World monkeys. The *Quadrumana* and all the higher mammals are probably derived from an ancient marsupial animal, and this through a long line of diversified forms from some amphibian-like creature, and this again from some fishlike animal. In the dim obscurity of the past we can see that the early progenitor of all the *Vertebrata* must have been an aquatic animal, provided with branchiæ, with the two sexes united in the same individual, and with the most important organs of the body (such as the brain and heart) imperfectly or not at all developed. This animal seems to have been more like the larvæ of the existing marine *Ascidians* than any other known form.

The high standard of our intellectual powers and moral disposition is the greatest difficulty which presents itself, after we have been driven to this conclusion on the origin of man. But every one who admits the principle of evolution must see that the mental powers of the higher animals, which are the same in kind with those of man, though so different in degree, are capable

of advancement. Thus the interval between the mental powers of one of the higher apes and of a fish, or between those of an ant and a scale insect, is immense, yet their development does not offer any special difficulty; for with our domesticated animals the mental faculties are certainly variable, and the variations are inherited. No one doubts that they are of the utmost importance to animals in a state of nature. Therefore the conditions are favorable for their development through natural selection. The same conclusion may be extended to man; the intellect must have been all important to him, even at a very remote period, as enabling him to invent and use language, to make weapons, tools, traps, etc., whereby with the aid of his social habits he long ago became the most dominant of all living creatures.

A great stride in the development of the intellect will have followed as soon as the half-art and half-instinct of language came into use; for the continued use of language will have reacted on the brain and produced an inherited effect; and this again will have reacted on the improvement of language. As Mr. Chauncey Wright¹ has well remarked, the largeness of the brain in man relatively to his body, compared with the lower animals, may be attributed in chief part to the early use of some simple form of language, — that wonderful engine which affixes signs to all sorts of objects and qualities, and excites trains of thought which would never arise from the mere impression of the senses, or if they did arise could not be followed out. The higher intellectual powers of man, such as those of ratiocination, abstraction, self-consciousness, etc., probably follow from the continued improvement and exercise of the other mental faculties.

The development of the moral qualities is a more interesting problem. The foundation lies in the social instincts, including under this term the family ties. These instincts are highly complex, and in the case of the lower animals give special tendencies toward certain definite actions; but the more important elements are love and the distinct emotion of sympathy. Animals endowed

¹ "On the Limits of Natural Selection," in the *North American Review*, October, 1870, p. 295.

with the social instincts take pleasure in one another's company, warn one another of danger, defend and aid one another in many ways. These instincts do not extend to all the individuals of the species, but only to those of the same community. As they are highly beneficial to the species, they have in all probability been acquired through natural selection.

A moral being is one who is capable of reflecting on his past actions and their motives, of approving of some and disapproving of others; and the fact that man is the one being who certainly deserves this designation is the greatest of all distinctions between him and the lower animals. But in a former chapter I have endeavored to show that the moral sense follows, firstly, from the enduring and ever-present nature of the social instincts; secondly, from man's appreciation of the approbation and disapprobation of his fellows; and thirdly, from the high activity of his mental faculties, with past impressions extremely vivid; and in these latter respects he differs from the lower animals. Owing to this condition of mind, man cannot avoid looking both backward and forward and comparing past impressions. Hence after some temporary desire or passion has mastered his social instincts, he reflects and compares the now weakened impression of such past impulses with the ever-present social instincts, and he then feels that sense of dissatisfaction which all unsatisfied instincts leave behind them; he therefore resolves to act differently for the future,—and this is conscience. Any instinct, permanently stronger or more enduring than another, gives rise to a feeling which we express by saying that it ought to be obeyed. A pointer dog, if able to reflect on his past conduct, would say to himself, I ought (as indeed we say of him) to have pointed at that hare and not have yielded to the passing temptation of hunting it.

Social animals are impelled partly by a wish to aid the members of their community in a general manner, but more commonly to perform certain definite actions. Man is impelled by the same general wish to aid his fellows, but has few or no special instincts. He differs also from the lower animals in the power of expressing his desires by words, which thus become a

guide to the aid required and bestowed. The motive to give aid is likewise much modified in man ; it no longer consists solely of a blind instinctive impulse, but is much influenced by the praise or blame of his fellows. The appreciation and the bestowal of praise and blame both rest on sympathy; and this emotion, as we have seen, is one of the most important elements of the social instincts. Sympathy, though gained as an instinct, is also much strengthened by exercise or habit. As all men desire their own happiness, praise or blame is bestowed on actions and motives, according as they lead to this end ; and as happiness is an essential part of the general good, the greatest-happiness principle indirectly serves as a nearly safe standard of right and wrong. As the reasoning powers advance and experience is gained, the remoter effects of certain lines of conduct on the character of the individual, and on the general good, are perceived; and then the self-regarding virtues come within the scope of public opinion and receive praise, and their opposites blame. But with the less civilized nations reason often errs, and many bad customs and base superstitions come within the same scope, and are then esteemed as high virtues, and their breach as heavy crimes.

The moral faculties are generally and justly esteemed as of higher value than the intellectual powers. But we should bear in mind that the activity of the mind in vividly recalling past impressions is one of the fundamental though secondary bases of conscience. This affords the strongest argument for educating and stimulating in all possible ways the intellectual faculties of every human being. No doubt a man with a torpid mind, if his social affections and sympathies are well developed, will be led to good actions, and may have a fairly sensitive conscience. But whatever renders the imagination more vivid and strengthens the habit of recalling and comparing past impressions will make the conscience more sensitive, and may even somewhat compensate for weak social affections and sympathies.

The moral nature of man has reached its present standard, partly through the advancement of his reasoning powers and consequently of a just public opinion, but especially from his

sympathies having been rendered more tender and widely diffused through the effects of habit, example, instruction, and reflection. It is not improbable that after long practice virtuous tendencies may be inherited. With the more civilized races, the conviction of the existence of an all-seeing Deity has had a potent influence on the advance of morality. Ultimately man does not accept the praise or blame of his fellows as his sole guide, though few escape this influence, but his habitual convictions, controlled by reason, afford him the safest rule. His conscience then becomes the supreme judge and monitor. Nevertheless, the first foundation or origin of the moral sense lies in the social instincts, including sympathy; and these instincts no doubt were primarily gained, as in the case of the lower animals, through natural selection.

The belief in God has often been advanced as not only the greatest but the most complete of all the distinctions between man and the lower animals. It is, however, impossible, as we have seen, to maintain that this belief is innate or instinctive in man. On the other hand, a belief in all-pervading spiritual agencies seems to be universal, and apparently follows from a considerable advance in man's reason, and from a still greater advance in his faculties of imagination, curiosity, and wonder. I am aware that the assumed instinctive belief in God has been used by many persons as an argument for his existence. But this is a rash argument, as we should thus be compelled to believe in the existence of many cruel and malignant spirits only a little more powerful than man, for the belief in them is far more general than in a beneficent Deity. The idea of a universal and beneficent Creator does not seem to arise in the mind of man until he has been elevated by long-continued culture.

He who believes in the advancement of man from some low organized form will naturally ask, How does this bear on the belief in the immortality of the soul? The barbarous races of man, as Sir J. Lubbock has shown, possess no clear belief of this kind; but arguments derived from the primeval beliefs of savages are, as we have just seen, of little or no avail. Few persons feel any anxiety from the impossibility of determining at what

precise period in the development of the individual, from the first trace of a minute germinal vesicle, man becomes an immortal being; and there is no greater cause for anxiety because the period cannot possibly be determined in the gradually ascending organic scale.¹

I am aware that the conclusions arrived at in this work will be denounced by some as highly irreligious; but he who denounces them is bound to show why it is more irreligious to explain the origin of man as a distinct species by descent from some lower form, through the laws of variation and natural selection, than to explain the birth of the individual through the laws of ordinary reproduction. The birth both of the species and of the individual are equally parts of that grand sequence of events, which our minds refuse to accept as the result of blind chance. The understanding revolts at such a conclusion, whether or not we are able to believe that every slight variation of structure, the union of each pair in marriage, the dissemination of each seed, and other such events have all been ordained for some special purpose.

Sexual selection has been treated at great length in this work, for, as I have attempted to show, it has played an important part in the history of the organic world. I am aware that much remains doubtful, but I have endeavored to give a fair view of the whole case. In the lower divisions of the animal kingdom sexual selection seems to have done nothing; such animals are often affixed for life to the same spot, or have the sexes combined in the same individual, or, what is still more important, their perceptive and intellectual faculties are not sufficiently advanced to allow of the feelings of love and jealousy, or of the exertion of choice. When, however, we come to the Arthropoda and Vertebrata, even to the lowest classes in these two great subkingdoms, sexual selection has effected much.

In the several great classes of the animal kingdom,—in mammals, birds, reptiles, fishes, insects, and even crustaceans,—the differences between the sexes follow nearly the same rules. The males are almost always the wooers, and they alone are armed with

¹ The Rev. J. A. Picton gives a discussion to this effect in his *New Theories and the Old Faith*, 1870.

special weapons for fighting with their rivals. They are generally stronger and larger than the females, and are endowed with the requisite qualities of courage and pugnacity. They are provided, either exclusively or in a much higher degree than the females, with organs for vocal or instrumental music, and with odoriferous glands. They are ornamented with infinitely diversified appendages and with the most brilliant or conspicuous colors, often arranged in elegant patterns, while the females are unadorned. When the sexes differ in more important structures it is the male which is provided with special sense organs for discovering the female, with locomotive organs for reaching her, and often with prehensile organs for holding her. These various structures for charming or securing the female are often developed in the male during only part of the year, namely, the breeding season. They have in many cases been more or less transferred to the females; and in the latter case they often appear in her as mere rudiments. They are lost or never gained by the males after emasculation. Generally they are not developed in the male during early youth, but appear a short time before the age for reproduction. Hence in most cases the young of both sexes resemble each other, and the female somewhat resembles her young offspring throughout life. In almost every great class a few anomalous cases occur, where there has been an almost complete transposition of the characters proper to the two sexes, the females assuming characters which properly belong to the males. This surprising uniformity in the laws regulating the differences between the sexes in so many and such widely separated classes is intelligible if we admit the action of one common cause, namely, sexual selection.

Sexual selection depends on the success of certain individuals over others of the same sex, in relation to the propagation of the species; while natural selection depends on the success of both sexes, at all ages, in relation to the general conditions of life. The sexual struggle is of two kinds: in the one it is between the individuals of the same sex, generally the males, in order to drive away or kill their rivals, the females remaining passive; while in the other, the struggle is likewise between the individuals of the

same sex, in order to excite or charm those of the opposite sex, generally the females, who no longer remain passive but select the more agreeable partners. This latter kind of selection is closely analogous to that which man unintentionally, yet effectually, brings to bear on his domesticated productions when he preserves during a long period the most pleasing or useful individuals, without any wish to modify the breed.

The laws of inheritance determine whether characters gained through sexual selection by either sex shall be transmitted to the same sex or to both, as well as the age at which they shall be developed. It appears that variations arising late in life are commonly transmitted to one and the same sex. Variability is the necessary basis for the action of selection, and is wholly independent of it. It follows from this that variations of the same general nature have often been taken advantage of and accumulated through sexual selection in relation to the propagation of the species, as well as through natural selection in relation to the general purposes of life. Hence secondary sexual characters, when equally transmitted to both sexes, can be distinguished from ordinary specific characters only by the light of analogy. The modifications acquired through sexual selection are often so strongly pronounced that the two sexes have frequently been ranked as distinct species, or even as distinct genera. Such strongly marked differences must be in some manner highly important, and we know that they have been acquired in some instances at the cost not only of inconvenience but of exposure to actual danger.

The belief in the power of sexual selection rests chiefly on the following considerations. Certain characters are confined to one sex, and this alone renders it probable that in most cases they are connected with the act of reproduction. In innumerable instances these characters are fully developed only at maturity, and often during only a part of the year, which is always the breeding season. The males (passing over a few exceptional cases) are the more active in courtship; they are the better armed, and are rendered the more attractive in various ways. It is to be especially observed that the males display their attractions with

elaborate care in the presence of the females, and that they rarely or never display them excepting during the season of love. It is incredible that all this should be purposeless. Lastly, we have distinct evidence with some quadrupeds and birds that the individuals of one sex are capable of feeling a strong antipathy or preference for certain individuals of the other sex.

Bearing in mind these facts, and the marked results of man's unconscious selection, when applied to domesticated animals and cultivated plants, it seems to me almost certain that if the individuals of one sex were during a long series of generations to prefer pairing with certain individuals of the other sex, characterized in some peculiar manner, the offspring would slowly but surely become modified in this same manner. I have not attempted to conceal that, excepting when the males are more numerous than the females, or when polygamy prevails, it is doubtful how the more attractive males succeed in leaving a larger number of offspring to inherit their superiority in ornaments or other charms than the less attractive males ; but I have shown that this would probably follow from females — especially the more vigorous ones, which would be the first to breed — preferring not only the more attractive but at the same time the more vigorous and victorious males.

Although we have some positive evidence that birds appreciate bright and beautiful objects, as with the bower birds of Australia, and although they certainly appreciate the power of song, yet I fully admit that it is astonishing that the females of many birds and some mammals should be endowed with sufficient taste to appreciate ornaments, which we have reason to attribute to sexual selection ; and this is even more astonishing in the case of reptiles, fish, and insects. But we really know little about the minds of the lower animals. It cannot be supposed, for instance, that male birds of paradise or peacocks should take such pains in erecting, spreading, and vibrating their beautiful plumes before the females for no purpose. We should remember the fact given on excellent authority in a former chapter, that several peahens, when debarred from an admired male, remained widows during a whole season rather than pair with another bird.

Nevertheless, I know of no fact in natural history more wonderful than that the female Argus pheasant should appreciate the exquisite shading of the ball-and-socket ornaments and the elegant patterns on the wing feathers of the male. He who thinks that the male was created as he now exists must admit that the great plumes, which prevent the wings from being used for flight, and which are displayed during courtship and at no other time in a manner quite peculiar to this one species, were given to him as an ornament. If so, he must likewise admit that the female was created and endowed with the capacity of appreciating such ornaments. I differ only in the conviction that the male Argus pheasant acquired his beauty gradually, through the preference of the females during many generations for the more highly ornamented males, the æsthetic capacity of the females having been advanced through exercise or habit just as our own taste is gradually improved. In the male, through the fortunate chance of a few feathers being left unchanged, we can distinctly trace how simple spots with a little fulvous shading on one side may have been developed by small steps into the wonderful ball-and-socket ornaments; and it is probable that they were actually thus developed.

Every one who admits the principle of evolution and yet feels great difficulty in admitting that female mammals, birds, reptiles, and fish could have acquired the high taste implied by the beauty of the males, and which generally coincides with our own standard, should reflect that the nerve cells of the brain in the highest as well as in the lowest members of the Vertebrate series are derived from those of the common progenitor of this great kingdom. For we can thus see how it has come to pass that certain mental faculties, in various and widely distinct groups of animals, have been developed in nearly the same manner and to nearly the same degree.

The reader who has taken the trouble to go through the entire discussion of sexual selection will be able to judge how far the conclusions at which I have arrived are supported by sufficient evidence. If he accepts these conclusions, he may, I think, safely extend them to mankind; but it would be superfluous here to repeat what I have so lately said on the manner in which

sexual selection apparently has acted on man, both on the male and female side, causing the two sexes to differ in body and mind, and the several races to differ from each other in various characters, as well as from their ancient and lowly organized progenitors.

He who admits the principle of sexual selection will be led to the remarkable conclusion that the nervous system not only regulates most of the existing functions of the body but has indirectly influenced the progressive development of various bodily structures and of certain mental qualities. Courage, pugnacity, perseverance, strength, and size of body, weapons of all kinds, musical organs, both vocal and instrumental, bright colors and ornamental appendages, have all been indirectly gained by the one sex or the other, through the exertion of choice, the influence of love and jealousy, and the appreciation of the beautiful in sound, color, or form; and these powers of the mind manifestly depend on the development of the brain.

Man scans with scrupulous care the character and pedigree of his horses, cattle, and dogs before he matches them; but when he comes to his own marriage he rarely or never takes any such care. He is impelled by nearly the same motives as the lower animals, when they are left to their own free choice, though he is in so far superior to them that he highly values mental charms and virtues. On the other hand, he is strongly attracted by mere wealth or rank. Yet he might by selection do something not only for the bodily constitution and frame of his offspring but for their intellectual and moral qualities. Both sexes ought to refrain from marriage if they are in any marked degree inferior in body or mind; but such hopes are Utopian and will never be even partially realized until the laws of inheritance are thoroughly known. Every one does good service who aids toward this end. When the principles of breeding and inheritance are better understood we shall not hear ignorant members of our legislature rejecting with scorn a plan for ascertaining whether or not, consanguineous marriages are injurious to man.

The advancement of the welfare of mankind is a most intricate problem; all ought to refrain from marriage who cannot avoid

abject poverty for their children ; for poverty is not only a great evil but tends to its own increase by leading to recklessness in marriage. On the other hand, as Mr. Galton has remarked, if the prudent avoid marriage, while the reckless marry, the inferior members tend to supplant the better members of society. Man, like every other animal, has no doubt advanced to his present high condition through a struggle for existence consequent on his rapid multiplication ; and if he is to advance still higher, it is to be feared that he must remain subject to a severe struggle. Otherwise he would sink into indolence, and the more gifted men would not be more successful in the battle of life than the less gifted. Hence our natural rate of increase, though leading to many and obvious evils, must not be greatly diminished by any means. There should be open competition for all men ; and the most able should not be prevented by laws or customs from succeeding best and rearing the largest number of offspring. Important as the struggle for existence has been and even still is, yet as far as the highest part of man's nature is concerned there are other agencies more important. For the moral qualities are advanced, either directly or indirectly, much more through the effects of habit, the reasoning powers, instruction, religion, etc., than through natural selection ; though to this latter agency may be safely attributed the social instincts, which afforded the basis for the development of the moral sense.

The main conclusion arrived at in this work, namely, that man is descended from some lowly organized form, will, I regret to think, be highly distasteful to many. But there can hardly be a doubt that we are descended from barbarians. The astonishment which I felt on first seeing a party of Fuegians on a wild and broken shore will never be forgotten by me, for the reflection at once rushed into my mind — such were our ancestors. These men were absolutely naked and bedaubed with paint, their long hair was tangled, their mouths frothed with excitement, and their expression was wild, startled, and distrustful. They possessed hardly any arts, and like wild animals lived on what they could catch ; they had no government, and were merciless to every one not of their own small tribe. He who has seen a savage in his

native land will not feel much shame, if forced to acknowledge that the blood of some more humble creature flows in his veins. For my own part, I would as soon be descended from that heroic little monkey, who braved his dreaded enemy in order to save the life of his keeper, or from that old baboon, who, descending from the mountains, carried away in triumph his young comrade from a crowd of astonished dogs, as from a savage who delights to torture his enemies, offers up bloody sacrifices, practices infanticide without remorse, treats his wives like slaves, knows no decency, and is haunted by the grossest superstitions.

Man may be excused for feeling some pride at having risen, though not through his own exertions, to the very summit of the organic scale; and the fact of his having thus risen, instead of having been aboriginally placed there, may give him hope for a still higher destiny in the distant future. But we are not here concerned with hopes or fears, only with the truth as far as our reason permits us to discover it; and I have given the evidence to the best of my ability. We must, however, acknowledge, as it seems to me, that man, with all his noble qualities, with sympathy which feels for the most debased, with benevolence which extends not only to other men but to the humblest living creature, with his godlike intellect, which has penetrated into the movements and constitution of the solar system, — with all these exalted powers, man still bears in his bodily frame the indelible stamp of his lowly origin.

XIII

NATIONAL LIFE FROM THE STANDPOINT OF SCIENCE¹

I want you to look with me for a while on mankind as a product of nature, and subject to the natural influences which form its environment. I will, first, notice a point which bears upon man as upon all forms of animal life. The characters of both parents — their virtues, their vices, their capabilities, their tempers, their diseases — all devolve in due proportion upon their children. Some may say, "Oh, yes ; but we know such things are inherited." I fear that the great majority of the nation does not realize what inheritance means, or much that happens now would not be allowed to happen. Our knowledge of heredity has developed enormously in the last few years ; it is no longer a vague factor of development, to be appealed to vaguely. Its intensity in a great variety of characters in a great many forms of life has been quantitatively determined, and we no longer stand even where we did ten years ago. The form of a man's head, his stature, his eye color, his temper, the very length of his life, the coat color of horses and dogs, the form of the capsule of the poppy, the spine of the water flea, — these and other things are all inherited, and in approximately the same manner. Nay, if we extend the notion of like producing like, we shall find, as I have recently done, that the same laws are probably true for the mushroom and for the forest tree ; that the principle of heredity runs with certainly no weakened intensity from the lowest to the highest organisms, and from their least to their most important characters.

Now let us try to understand exactly what this means. Of a definite child of A and B we can assert nothing with certainty,

¹ By Karl Pearson, pp. 14-34, 41-57 (copyright, 1901, by Adam and Charles Black, London ; Macmillan & Co., New York).

but of all the children of a definite class of parents like A and B we can assert that a definite proportion will have a definite amount of any character of A and B with a certainty as great as that of any scientific prediction whatever. I am not speaking from belief or from theory, but simply from facts, from thousands of instances recorded by my fellow-workers or myself. Here is a great principle of life, something apparently controlling all life from its simplest to its most complex forms, and yet, although we too often see its relentless effects, we go on hoping that at any rate we and our offspring shall be the exceptions to its rules. For one of us as an individual this may be true, but for the *average* of us all, for the nation as a whole, it is an idle hope. You cannot change the leopard's spots, and you cannot change bad stock to good; you may dilute it, possibly spread it over a wider area, spoiling good stock, but until it ceases to multiply it will not cease to be. A physically and mentally well-ordered individual will arise as a variation in bad stock, or possibly may result from special nurture, but the old evils will in all probability reappear in a definite percentage of the offspring.

I know of the case of just such a good variation appearing in a certain bad stock as far back as 1680, and the offspring of which married in the early eighteenth century into a number of good stocks, several of which we can trace in the records of the religious community of which they were members for nearly one hundred and fifty years. And what do we find? In each generation the same sort of proportion of cases of drunkenness, insanity, and physical breakdown arising to distress and perplex their kinsfolk.

Now if we once realize that this law of inheritance is as inevitable as the law of gravity, we shall cease to struggle against it. This does not mean a fatal resignation to the presence of bad stock, but a conscious attempt to modify the percentage of it in our own community and in the world at large. Let me illustrate what I mean. A showman takes a wolf and, by aid of training and nurture and a more or less judicious administration of food and whip, makes it apparently docile and friendly as a dog. But one day, when the whip is not there, it is quite

possible that the wolf will turn upon its keeper or upon somebody else. Even if it does not, its offspring will not benefit by the parental education. I don't believe that the showman's way can be a *permanent* success; I believe, however, that you might completely domesticate the wolf, as the dog has been domesticated, by steadily selecting the more docile members of the community through several generations, and breeding only from these, rejecting the remainder. Now if you have once realized the force of heredity, you will see in natural selection — that choice of the physically and mentally fitter to be the parents of the next generation — a most munificent provision for the progress of all forms of life. Nurture and education may immensely aid the social machine, but they must be repeated generation by generation; they will not in themselves reduce the tendency to the production of bad stock. Conscious or unconscious selection can alone bring that about.

What I have said about bad stock seems to me to hold for the lower races of man. How many centuries, how many thousands of years have the Kaffir and the negro held large districts in Africa undisturbed by the white man! Yet their intertribal struggles have not yet produced a civilization in the least comparable with the Aryan. Educate and nurture them as you will, I do not believe that you will succeed in modifying the stock. History shows me one way, and one way only, in which a high state of civilization has been produced, namely, the struggle of race with race, and the survival of the physically and mentally fitter race. If you want to know whether the lower races of man can evolve a higher type, I fear the only course is to leave them to fight it out among themselves, and even then the struggle for existence between individual and individual, between tribe and tribe, may not be supported by that physical selection due to a particular climate on which probably so much of the Aryan's success depended.

If you bring the white man into contact with the black, you too often suspend the very process of natural selection on which the evolution of a higher type depends. You get superior and inferior races living on the same soil, and that coexistence is

demoralizing for both. They naturally sink into the position of master and servant, if not admittedly or covertly into that of slave owner and slave. Frequently they intercross, and if the bad stock be raised, the good is lowered. Even in the case of Eurasians, of whom I have met mentally and physically fine specimens, I have felt how much better they would have been had they been pure Asiatics or pure Europeans. Thus it comes about that when the struggle for existence between races is suspended the solution of great problems may be unnaturally postponed; instead of the slow, stern processes of evolution, cataclysmal solutions are prepared for the future. Such problems in suspense, it appears to me, are now to be found in the negro population of the southern states of America, in the large admixture of Indian blood in some of the South American races, but, above all, in the Kaffir factor in South Africa.

You may possibly think that I am straying from my subject, but I want to justify natural selection to you. I want you to see selection as something which renders the inexorable law of heredity a source of progress, which produces the good through suffering, an infinitely greater good which far outbalances the very obvious pain and evil. Let us suppose the alternative were possible. Let us suppose we could prevent the white man, if we liked, from going to lands of which the agricultural and mineral resources are not worked to the full; then I should say a thousand times better for him that he should not go than that he should settle down and live alongside the inferior race. The only healthy alternative is that he should go, and completely drive out the inferior race. That is practically what the white man has done in North America. We sometimes forget the light that chapter of history throws on more recent experiences. Some two hundred and fifty years ago there was a man who fought in our country against taxation without representation, and another man who did not mind going to prison for the sake of his religious opinions. As Englishmen we are proud of them both, but we sometimes forget that they were both considerable capitalists for their age, and started chartered companies in another continent. Well, a good deal went on in the plantations

they founded, if not with their knowledge, with that, at least, of their servants and of their successors, which would shock us at the present day. But I venture to say that no man calmly judging will wish either that the whites had never gone to America, or would desire that whites and red Indians were to-day living alongside each other as negro and white in the southern states, as Kaffir and European in South Africa, still less that they had mixed their blood as Spaniard and Indian in South America. The civilization of the white man is a civilization dependent upon free white labor, and when that element of stability is removed it will collapse like those of Greece and Rome. I venture to assert, then, that the struggle for existence between white and red man, painful and even terrible as it was in its details, has given us a good far outbalancing its immediate evil. In place of the red man, contributing practically nothing to the work and thought of the world, we have a great nation, mistress of many arts, and able with its youthful imagination and fresh, untrammelled impulses to contribute much to the common stock of civilized man. Against that you have only to put the romantic sympathy for the red Indian generated by the novels of Cooper and the poems of Longfellow, and then see how little it weighs in the balance.

But America is but one case in which we have to mark a masterful human progress following an interracial struggle. The Australian nation is another case of a great civilization supplanting a lower race unable to work to the full the land and its resources. Further back in history you find the same tale with almost every European nation. Sometimes when the conquering race is not too diverse in civilization and in type of energy there is an amalgamation of races, as when Norman and Anglo-Saxon ultimately blended; at other times the inferior race is driven out before the superior, as the Celt drove out the Iberian. The struggle means suffering, intense suffering, while it is in progress; but that struggle and that suffering have been the stages by which the white man has reached his present stage of development, and they account for the fact that he no longer lives in caves and feeds on roots and nuts. This dependence of progress on the survival of the fitter race, terribly black as it may seem

to some of you, gives the struggle for existence its redeeming features; it is the fiery crucible out of which comes the finer metal. You may hope for a time when the sword shall be turned into the plowshare, when American and German and English traders shall no longer compete in the markets of the world for their raw material and for their food supply, when the white man and the dark shall share the soil between them, and each till it as he lists. But, believe me, when that day comes mankind will no longer progress; there will be nothing to check the fertility of inferior stock; the relentless law of heredity will not be controlled and guided by natural selection. Man will stagnate; and unless he ceases to multiply, the catastrophe will come again; famine and pestilence, as we see them in the East, physical selection instead of the struggle of race against race, will do the work more relentlessly and, to judge from India and China, far less efficiently than of old.

Let us face this question of increasing population boldly. We cannot escape it. Sooner or later it must and will make itself felt in every progressive nation; for what I have said of the struggle of race against race makes itself again felt within every community. A nation like the French can largely limit the number of its offspring; but how shall we be sure that these offspring are from the better and not from the inferior stock? If they come equally from both stocks and there be no wastage, then the nation has ceased to progress; it stagnates. I feel sure that a certain amount of wastage is almost necessary for a progressive nation; you want definite evidence that the inferior stocks are not able to multiply at will, that a certain standard of physique and brains are needful to a man if he wishes to settle and have a family.

Mr. Francis Galton has suggested that we might progress far more rapidly than we at present do under this crude system of unconscious wastage if we turned our thoughts more consciously to the problem, if we emphasized the need of social action in this direction, and made men and women feel the importance of good parentage for the citizens of the future. But I fear our present economic and social conditions are hardly yet ripe for such a

movement ; the all-important question of parentage is still largely felt to be solely a matter of family and not of national importance. Yet how antisocial such a view may be can be easily realized. From the standpoint of the nation we want to inculcate a feeling of shame in the parents of a weakling, whether it be mentally or physically unfit. We want parents to grasp that they have given birth to a new *citizen*, and that this involves, on the one hand, a duty towards the community in respect of his breed and nurture, and a claim, on the other hand, of the parents on the state, that the latter shall make the conditions of life favorable to the rearing of healthy, mentally vigorous men and women. Bear in mind that one quarter only of the married people of this country — say, a sixth to an eighth of the adult population — produce fifty per cent of the next generation. You will then see how essential it is for the maintenance of a physically and mentally fit race that this one sixth to one eighth of our population should be drawn from the best and not from the worst stocks. A nation that begins to tamper with its fertility may unconsciously have changed its national characteristics before two generations have passed.

France is becoming a land of Bretons because the Bretons alone have large families. And what about England? Our birth rate has been going down for perhaps thirty years. Who will venture to assert that this decreased fertility has occurred in the inferior stocks? On the contrary, is it not the reckless and improvident who have the largest families? The professional classes, the trading classes, the substantial and provident working classes — shortly, the capable elements of the community with a certain standard of life — have been marrying late, have been having small families, have been increasing their individual comfort, and all this is at the expense of the nation's future. We cannot suspend the struggle for existence in any class of the community without stopping progress ; we cannot recruit the nation from its inferior stocks without deteriorating our national character.

Now what have our economic conditions in England been during the last thirty years? The accumulation of wealth has been such at one end of society that no test of brains or of

physique was needful before a man multiplied his type. Death duties and the inherent tendency of folly to squander its substance were only very inefficient, very partial, checks on the endowment in perpetuity of the brainless. At the other end of society we allowed a condition of affairs to exist in which no greater discomfort could well be produced by the introduction of additional human beings; there were always charity and the state ready to provide, more or less inefficiently, for the surplus population. There has been scarcely any check on the multiplication of inferior stock; only in the middle ranks, among the more substantial workers with the hand and the head, have men regarded the number of their offspring and made success in life's struggle to some extent a condition of their multiplication.

Now surely this is a very dangerous state of affairs for the nation at large. A crisis may come in which we may want all the brain and all the muscle we can possibly lay our hands on, and we may find that there is a dearth of ability and a dearth of physique because we have allowed inferior stock to multiply at the expense of the better. There are occasions when a nation wants a reserve of strong men, and when it must draw brain and muscle from classes and from forms of work wherein they are not exercised to the full. And in that day woe to the nation which has recruited itself from the weaker and not from the stronger stocks! If you have not the means to start all your offspring in your own class, let them do the work of another; if you cannot make them into lawyers and engineers, let them be village schoolmasters and mechanics; or, if this should raise an insurmountable, if utterly false, shame, let them go to new lands even as miners, cowboys, and storekeepers; they will strengthen the nation's reserve, and this is far better than that they should never have existed at all.

I will not say that we have a dearth of ability and of physique at this time, but I will venture to assert that there has of recent years been a want of them in the right places, and that last year, but for the reserve of strong men in our colonies, we should have been in far greater difficulties than we were. It is not only in warfare — that is the crudest form of the modern struggle of

nations — but in manufacture and in commerce that there has been a want of brains in the right place. Leadership in trade is really no more than leadership in the army open to the man of brains; in both cases it becomes a question of wealth; the endowed but brainless get the start. Consider, again, how the led are, in many cases, not the mentally and physically best for the task; they are too often the surplus of the inferior stocks. What wonder when we put the one in competition with the brains and training of the German commercial and technical houses that we meet defeat! What wonder when we take the other out of its environment that the leaders cannot lead, and the led fall an easy prey to sickness and disease! The regiment which has marched farthest and has marched quickest, which has suffered little from disease and fought as well as any in the Transvaal, is a volunteer regiment, drawn from that very reserve of strength in the better stocks to which I have referred.

In industry it is the same thing. We shall do no good against the American and the German by a mere multiplication of centers of technical instruction. What we want to do is to bring brains into our industry from top to bottom. Where the brains already exist, there training will work wonders; but we shall not make the product of inferior stock capable men by merely teaching them the tricks of their trade. In one polytechnic I found lads learning how to fold cretonnes and polish mahogany; that is to say, the manufacturers had thrust the cost of apprenticeship on the public purse, perhaps to some extent lowering the price of sofas and easy-chairs to those who care about them. The object of any technical education paid for by the state or the municipality should be the exercise of brain power, mental gymnastics in the best sense; it should treat of the science and not the art of a trade. Such education — education, remember, means literally a *drawing out*, not a cramming in — ought to act as a brain stretcher, and not attempt to communicate mere trade knowledge. Where it does the latter — and in how many cases does it not, under our brand-new system of technical instruction? — then it is merely relieving the manufacturers, and possibly the purchasers, of certain goods of such part of their cost as has hitherto been

paid for apprenticeship. On the other hand, when technical education acts as a brain stretcher, then this increased efficiency tells not only on the trade occupations but on the social and civic life of the educated; the nation is thereby strengthening the reserve of trained brains upon which it can draw in a crisis for all sorts of other functions than those of a narrow trade. Brain stretching fosters an adaptability to new environments. This is something very different from a more complete knowledge of trade processes or proficiency in a special handicraft. This is a form of education for which the nation may legitimately pay; it is that which is essential to it in the struggle for existence.

I am not speaking without some experience. I have been engaged for sixteen years in helping to train engineers, and those of my old pupils who are now coming to the front in life are not those who stuck to facts and formulæ, and sought only for what they thought would be "useful to them in their profession." On the contrary, the lads who paid attention to method, who thought more of proofs than of formulæ, who accepted even the specialized branches of their training as a means of developing habits of observation rather than of collecting "useful facts," — these lads have developed into men who are succeeding in life. And the reason of this seems to me, when considering their individual cases, to be that they could adapt themselves to an environment more or less different from that of the existing profession; they could go beyond its processes, its formulæ, and its facts, and develop new ones. Their knowledge of method and their powers of observation enabled them to supply new needs, to answer to the call when there was a demand not for old knowledge but for trained brains. . . .

It may be as well now to sum up my position as far as I have yet developed it. I have asked you to look upon the nation as an organized whole in continual struggle with other nations, whether by force of arms or by force of trade and economic processes. I have asked you to look upon this struggle of either kind as not wholly a bad thing; it is the source of human progress throughout the world's history. But if a nation is to maintain its position in this struggle, it must be fully provided with trained brains

in every department of national activity, from the government to the factory, and have, if possible, a *reserve of brain and physique* to fall back upon in times of national crisis. Recent events in our commercial as well as in our military experience have led some to doubt whether our supply of trained brains is sufficient, or, at any rate, whether it is available in the right place at the right moment. Those presumably who hold that the brains are forthcoming have raised the cry of technical instruction, which is to be a remedy for our commercial difficulties. I have little doubt that when this war is finished the cry of military instruction will be raised for our army difficulties. In the latter as in the former case large sums of money will no doubt be demanded for equipment. But I have endeavored to indicate that there are two preliminary matters to be considered. First, are we quite certain that we have a reserve of brain power ready to be trained? We have to remember that man is subject to the universal law of inheritance, and that a dearth of capacity may arise if we recruit our society from the inferior and not from the better stock. If any social opinions or class prejudices tamper with the fertility of the better stocks, then the national character will take but a few generations to be seriously modified. The pressure of population should always tend to push brains and physique into occupations where they are not a primary necessity, for in this way a reserve is formed for the times of national crisis. Such a reserve can always be formed by filling up with men of our own kith and kin the waste lands of the earth, even at the expense of an inferior race of inhabitants. Yet if we grant that our nation has a full supply of brains both in action and in reserve, it is not knowledge in the first place but intellectual training which is requisite. We want the master scout to teach men to observe and reason on their observations, and the equipment of the scout, the actual knowledge of facts and processes, is a minor matter.

You will see that my view — and I think it may be called the scientific view of a nation — is that of an organized whole, kept up to a high pitch of internal efficiency by insuring that its numbers are substantially recruited from the better stocks, and kept up to a high pitch of external efficiency by contest, chiefly by

way of war with inferior races, and with equal races by the struggle for trade routes and for the sources of raw material and of food supply. This is the natural-history view of mankind, and I do not think you can in its main features subvert it. Some of you may refuse to acknowledge it, but you cannot really study history and refuse to see its force. Some of you may realize it, and then despair of life ; you may decline to admit any glory in a world where the superior race must either eject the inferior, or, mixing with it or even living alongside it, degenerate itself. What beauty can there be when the battle is to the stronger, and the weaker must suffer in the struggle of nations and in the struggle of individual men ? You may say : Let us cease to struggle, let us leave the lands of the world to the races that cannot profit by them to the full, let us cease to compete in the markets of the world. Well, we could do it, if we were a small nation living on the produce of our own soil, and a soil so worthless that no other race envied it and sought to appropriate it. We should cease to advance ; but then we should naturally give up progress as a good which comes through suffering. I say it is possible for a small rural community to stand apart from the world-contest and to stagnate, if no more powerful nation wants its possessions.

But are we such a community ? Is it not a fact that the daily bread of our millions of workers depends on their having somebody to work for ? that if we give up the contest for trade routes and for free markets and for waste lands, we indirectly give up our food supply ? Is it not a fact that our strength depends on these and upon our colonies, and that our colonies have been won by the ejection of inferior races, and are maintained against equal races only by respect for their and our present power ? If war or competition lessen the China trade, if a bad harvest or a flood check the import of Egyptian or American cotton, it is the Lancashire operative who feels the pinch. The day when we cease to hold our own among the nations will be the day of catastrophe for our workers at home. We could return to the condition of mediæval England, to the condition of Norway or Denmark, but only by a process of intense selection, reducing

our millions in a manner which the imagination refuses to contemplate. Being as we are, we cannot give up the struggle, and the moment dearth of ability, the want of brains and physique in the right place, leads to serious defeat, our catastrophe will come. That is the vision which depressed thoughtful men at the beginning of this year; that is the dread which must be ever in the mind of the true statesman when he seeks, on the one hand, to curb the rash venture which may overstrain our power, and on the other hand, to maintain our right to work the unutilized resources of the earth, be they in Africa or in Asia.

Struggle of race against race, and of man against man, — if this be the scientific view of life, the basis of human progress, how have human love and sympathy come to play such a great part in the world? Here, again, I think science has something to say, although the earlier interpreters of evolution rather obscured it. They painted evolution as the survival of the fittest *individual*, and spoke of his struggle against his *fellows*.

But this is not the only form of selection at work; it is often quite the least effective phase of the contest. Consciously or unconsciously, one type of life is fighting against a second type, and all life is struggling with its physical environment. The safety of a gregarious animal — and man is essentially such — depends upon the intensity with which the social instinct has been developed. The stability of a race depends entirely on the extent to which the social feelings have got a real hold on it. The race which allows the physically or mentally stronger Tom to make the existence of the somewhat inferior Jack impossible will never succeed when it comes into contest with a second race. Jack has no interests in common with Tom; the oppressed will hardly get worse terms from a new master. That is why no strong and permanent civilization can be built upon slave labor, why an inferior race doing menial labor for a superior race can give no stable community; that is why we shall never have a healthy social state in South Africa until the white man replaces the dark in the fields and in the mines, and the Kaffir is pushed back towards the equator. The nation organized for the struggle must be a *homogeneous* whole, not a mixture of superior and

inferior races. For this reason, every new land we colonize with white men is a source of strength; every land of colored men we simply rule may be needful as a source of food and mineral wealth, but it is not an element of stability to our community, and must ever be regarded with grave anxiety by our statesmen.

This need for homogeneity in a nation may be pushed further. You must not have class differences and wealth differences and education differences so great within the community that you lose the sense of common interest, and feel only the pressure of the struggle of man against man. No tribe of men can work together unless the tribal interest dominates the personal and individual interest at all points where they come into conflict. The struggle among primitive man of tribe against tribe evolved the social instinct. The tribe with the greater social feeling survived; we have to thank the struggle for existence for first making man gregarious, and then intensifying, stage by stage, the social feeling. Such is the scientific account of the origin of our social instincts; and if you come to analyze it, such is the origin of what we term morality; morality is only the developed form of the tribal habit, the custom of acting in a certain way towards our fellows, upon which the very safety of the tribe originally depended. Philosophies may be invented, the super-sensuous appealed to, in order to increase the sanctions on social or moral conduct; but the natural history of morality begins with the kin, spreads to the tribe, to the nation, to allied races, and ultimately to inferior races and lower types of life, but ever with decreasing intensity. The demands upon the spirit of self-sacrifice which can be made by our kin, by our countrymen, by Europeans, by Chinamen, by negroes, by Kaffirs, and by animals may not be clearly defined; but, on the average, they admit of rough graduation, and we find in practice, whatever be our fine philosophies, that the instinct to self-sacrifice wanes as we go down in the scale.

The man who tells us that he feels alike toward all men, that he has no sense of kinship, that he has no patriotic sentiment, that he loves the Kaffir as he loves his brother, is probably deceiving himself. If he is not, then all we can say is that a nation of such

men, or even a nation with a large minority of such men, will not stand for many generations ; it cannot survive in the struggle of the nations ; it cannot be a factor in the contest upon which human progress ultimately depends. The national spirit is not a thing to be ashamed of, as the educated man seems occasionally to hold. If that spirit be the mere excrescence of the music hall, or an ignorant assertion of superiority to the foreigner, it may be ridiculous, indeed it may even be nationally dangerous ; but if the national spirit takes the form of a strong feeling of the importance of organizing the nation as a whole, of making its social and economic conditions such that it is able to do its work in the world and meet its fellows without hesitation in the field and in the market, then it seems to me a wholly good spirit, — indeed, one of the highest forms of social — that is, moral — instinct.

So far from our having too much of this spirit of patriotism, I doubt if we have anything like enough of it. We wait to improve the condition of some class of workers until they themselves cry out or even rebel against their economic condition. We do not better their state because we perceive its relation to the strength and stability of the nation as a whole. Too often it is done as the outcome of a blind class war. The coal owners, the miners, the manufacturers, the mill hands, the landlords, the farmers, and the agricultural laborers struggle by fair means, and occasionally by foul, against each other, and, in doing so, against the nation at large, and our statesmen as a rule look on. That was the correct attitude from the standpoint of the old political economy. It is not the correct attitude from the standpoint of science ; for science realizes that the nation is an organized whole, in continual struggle with its competitors. You cannot get a strong and effective nation if many of its stomachs are half fed and many of its brains untrained. We, as a nation, cannot survive in the struggle for existence if we allow class distinctions to permanently endow the brainless and to push them into posts of national responsibility. The true statesman has to limit the internal struggle of the community in order to make it stronger for the external struggle. We must reward ability, we must pay for brains, we must give larger advantage to physique ; but we

must not do this at a rate which renders the lot of the mediocre an unhappy one. We must foster exceptional brains and physique for national purposes ; but however useful prize cattle may be, they are not bred for their own sake, but as a step toward the improvement of the whole herd.

If I have put my position at all clearly, you will see how the key to it lies in the *gregarious* nature of man. The older evolutionists overlooked several of the factors of the struggle for existence. They emphasized, in a way which now appears almost absurd, the struggle of individual with individual. They do not appear to have recognized that many of the characters which give man his foremost place in the animal kingdom were evoked in the struggle of tribe against tribe, of race against race, and even of man as a whole against other forms of life and against his physical environment. Like the older political economists, they thought all real progress depended upon an all-round fight within the community. They forgot that the herd exists owing to its social instincts, and that human sympathy and racial and national feelings are strong natural forces controlling individual conduct and economic theories based purely on questions of supply and demand. It is the herd, the tribe, or the nation which forms the fundamental unit in the evolution of man, and it is to the leaders of the herd, or nation, that we ought to look for conscious recognition of this fact.

If they are true statesmen they ought not merely to advance in the direction they may be pushed by the immediate needs of one overburdened class, or by the overloud cry of another, for the time being, dominant group ; they ought to look upon the community as an organized whole, and treat class needs and group cries from the standpoint of the efficiency of the herd at large. Their duty is to lessen, if not to suspend, the internal struggle, that the nation may be strong externally. One point only is fundamental in that suspension of the internal struggle, and this holds for man as for every gregarious animal : social sympathy and state aid must not be carried so far within the community that the intellectually and physically weaker stocks multiply at the same rate as the better stocks.

The dearth of brains and the dearth of physique are the worst misfortunes that can befall a nation, and yet how many of our rulers realize that brains and physique are not things scattered at random among the population, which they can lay their hands on whenever they need them? Our legislators get wonderfully excited over laws relating to horses and cattle; they devote money and time to breeding purposes, and realize the strength of the law of inheritance when they endow national studs and give prizes to encourage the maintenance of good stock, or when again they work for the establishment of selected herds. But which of them has considered domestic legislation from the natural-history standpoint? What statesman has remembered that in the character of the national fertility of to-day is written the strength or weakness of the nation to-morrow? I fear we leave these things to chance, to the caprice of individual selfishness. As long as the social conditions were such that the weak within the community were not protected by the state, as long as there was no restriction on the fertility of the better stocks, we might in a rough-and-ready manner trust that our population would be recruited from its fitter members. But with the social movements of the present day, the reduction in infantile mortality, principally of the inferior stocks, and the reduction in the birth rate, principally of the superior stocks, science may well call the attention of our rulers to a possible famine, — a day when we shall want brains and physique, and shall not find the necessary reserve for them.

Take the case of genius alone. Mr. Galton has shown us that it largely arises from special stocks; but if those stocks decrease their output, then by so much does the rare chance of a man of genius appearing grow rarer. Again, I repeat, we may, after all, only want brains in the right place. But besides the need of them in South Africa, which was recently fairly manifest, look to any branch of national life, and may we not fear the dearth has already begun? Where are the young men in the political world who can stir even a small section of the community to united action? Where are the younger civil servants to replace our dying proconsuls, and to whom the nation can commit with a

feeling of security and confidence the future problems of South Africa? Where are the new writers to whom the nation listens as it did to Carlyle, Ruskin, and Browning? or for whose books it eagerly waits as for those of Thackeray and George Eliot? Where are the leaders of science who will make the epoch that Darwin and Huxley made in biology, or Faraday and Clerk Maxwell in physics? There may be steady average ability, but where is the fire of genius, the spirit of enthusiasm, which creates the leader of men either in thought or action? Alas! it is difficult to see any light on the horizon predicting the dawn of an intellectual renaissance, or heralding social and political reforms such as carried the nation through the difficult fifty years of the middle of this century. Possibly our strong men may have got into the wrong places. Ability may have drifted on to the Stock Exchange, the race course, or the cricket field, for aught I can say to the contrary; but I must confess to feeling sometimes that an actual dearth is upon us. And if this should be so, then the unchangeable law of heredity shows us only too clearly the source: we have multiplied from the inferior and not from the superior stocks.

XIV

THE PROLONGATION OF INFANCY¹

It is now time to propose an answer to the question, already twice suggested and partly answered, How did social evolution originate? Starting from the researches of Sir Henry Maine, which are supported by those of Messrs. Tylor, M'Lennan, and Lubbock, we have come to the conclusion that it originated when families, temporarily organized among all the higher gregarious mammals, became in the case of the highest mammal permanently organized. Starting from the deductions of Mr. Wallace, we have seen reason for believing that civilization originated when in the highest mammal variations in intelligence became so much more important than variations in physical structure that they began to be seized upon by natural selection to the relative exclusion of the latter. In the permanent family we have the germ of society. In the response to outer relations by psychical changes, which almost completely subordinate physical changes, we have the germ of civilization. Let us now take a step in advance of previous speculation, and see what can be done by combining these two theorems, so that the permanent organization of families and the complex intelligence of the highest mammal will appear in their causal relations to each other.

Many mammals are gregarious, and gregariousness implies incipient power of combination and of mutual protection. But gregariousness differs from sociality by the absence of definitive family relationships, except during the brief and intermittent periods in which there are helpless offspring to be protected. Now it might be maintained that the complex intelligence of the highest mammal led him vaguely to recognize the advantage

¹ From *Outlines of Cosmic Philosophy*, by John Fiske, Part II, chap. xxii, pp. 340-348, 360-362 (copyright, 1874, by Houghton, Mifflin & Co., Boston).

of associating in more and more permanent groups for the sake of mutual protection. From this point of view Mr. Darwin argues that men were originally a race of weak and mild creatures like chimpanzees, and not a race of strong and ferocious creatures like gorillas, and were accordingly forced to combine because unable to defend themselves singly. It is undeniable that man is, relatively to his size, a weak animal; and there is much value in Mr. Darwin's suggestion, in so far as it goes to explain the origin of gregariousness among those primates who were the ancestors of man. Nevertheless, it can hardly be said to explain sociality as distinguished from gregariousness. It may also be argued that the superior sagacity even of the lowest savage makes him quite a formidable antagonist to animals much more powerful than himself. Besides, the study of savage life brings out results at variance with the notion of man's primitive gentleness. A strong case might be made in support of the statement that uncivilized man is an extremely ferocious animal, and that among savage races, which certainly differ very notably in natural ferocity of disposition, the most ferocious tribes are often the most likely to become dominant and assist social integration by subduing other tribes. The earliest annals of the highest of human races, the Aryan, certainly bear witness to extreme ferocity, checked and determined in its direction by a moral sense further developed than that of savages. While recognizing, therefore, the value of Mr. Darwin's suggestion, so far as it goes, I believe that the true explanation lies much further beneath the surface.

It will be remembered that, in treating of the parallel evolution of the mind and the nervous system, it was shown that the increase of intelligence in complexity and speciality involves a lengthening of the period during which the nervous connections involved in ordinary adjustments are becoming organized. Even if the physical interpretation there given should turn out to be inadequate, the fact remains undeniable, that while the nervous connections accompanying a simple intelligence are already organized at birth, the nervous connections accompanying a complex intelligence are chiefly organized after birth. Thus there

arise the phenomena of infancy, which are nonexistent among those animals whose psychical actions are purely reflex and instinctive. Infancy, psychologically considered, is the period during which the nerve connections and correlative ideal associations necessary for self-maintenance are becoming permanently established. Now this period, which only begins to exist when the intelligence is considerably complex, becomes longer and longer as the intelligence increases in complexity. In the human race it is much longer than in any other race of mammals, and it is much longer in the civilized man than in the savage. Indeed, among the educated classes of civilized society, its average duration may be said to be rather more than a quarter of a century, since during all this time those who are to live by brain work are simply acquiring the capacity to do so, and are usually supported upon the products of parental labor.

It need not be said that, on the general theory of evolution, the passage from the short infancy of other primates to the relatively long infancy witnessed among the lowest contemporary savages cannot have been a sudden one. But a special reason may be assigned why nature, which never makes long jumps, must have been incapable of making this particular jump. Throughout the animal kingdom the period of infancy is correlated with the feelings of parental affection, sometimes confined to the mother, but often shared by the father, as in the case of animals which mate. Where, as among the lower animals, there is no infancy, there is no parental affection. Where the infancy is very short, the parental feeling, though intense while it lasts, presently disappears, and the offspring cease to be distinguished from strangers of the same species. And in general the duration of the feelings which insure the protection of the offspring is determined by the duration of the infancy. The agency of natural selection in maintaining this balance is too obvious to need illustration. Hence, if long infancies could have suddenly come into existence among a primitive race of apelike men, the race would have quickly perished from inadequate persistence of the parental affections. The prolongation must therefore have been gradual, and the same increase of intelligence to which it was due must

also have prolonged the correlative parental feelings, by associating them more and more with anticipations and memories. The concluding phases of this long change may be witnessed in the course of civilization. Our parental affections now endure through life ; and while their fundamental instinct is perhaps no stronger than in savages, they are, nevertheless, far more effectively powerful, owing to our far greater power of remembering the past and anticipating the future.

I believe we have now reached a very thorough and satisfactory explanation of the change from gregariousness to sociality. Bear in mind that I am not indulging in pure hypothesis. The prolongation of infancy accompanying the development of intelligence, and the correlative extension of parental feelings, are facts established by observation wherever observation is possible. And to maintain that the correlation of these phenomena was kept up during an epoch which is hidden from observation, and can only be known by inference, is to make a genuine induction, involving no other assumption than that the operations of nature are uniform. To him who is still capable of believing that the human race was created by miracle in a single day, with all its attributes, physical and psychical, compounded and proportioned just as they now are, the present inquiry is, of course, devoid of significance. But for the evolutionist there would seem to be no alternative but to accept, when once propounded, the present series of inferences.

For the process here described, when long enough continued, must inevitably differentiate and integrate a herd or troop of gregarious apelike men into a number of small family communities such as are now found among the lowest savages. The prolonged helplessness of the offspring must keep the parents together for longer and longer periods in successive epochs ; and when at last the association is so long kept up that the older children are growing mature while the younger ones still need protection, the family relations begin to become permanent. The parents have lived so long in company, that to seek new companionships involves some disturbance of ingrained habits ; and meanwhile the older sons are more likely to continue their original

association with each other than to establish associations with strangers, since they have common objects to achieve, and common enmities, bequeathed and acquired, with neighboring families. As the parent dies, the headship of the family thus established devolves upon the oldest or bravest or most sagacious male remaining. Thus the little group gradually becomes a clan, the members of which are united by ties considerably stronger than those which ally them to members of adjacent clans, with whom they may indeed combine to resist the aggressions of yet further outlying clans, or of formidable beasts, but towards whom their feelings are usually those of hostile rivalry. It remains to add, that the family groups thus constituted differ widely in many respects from modern families, and do not afford the materials for an idyllic picture of primeval life. Though always ready to combine against the attack of a neighboring clan, the members of the group are by no means indisposed to fight among themselves. The sociality is but nascent: infants are drowned, wives are beaten to death, and there are deadly quarrels between brothers. So in modern families evanescent barbarism shows itself in internal quarrels, while nevertheless injury offered from without is resented in common. A more conspicuous difference is the absence of monogamy in the primitive clan. It has been, I think, demonstrated — and for the evidence in detail I would refer to Sir John Lubbock's excellent treatise, "The Origin of Civilization and the Primitive Condition of Man," and to the learned works of M'Lennan and Tylor — that in the primitive clan all the women are the wives of all the men. Traces of this state of things, which some of our half-educated "reformers" would fain restore, are found all over the world, both in modern savage communities and in traditional observances preserved by communities anciently civilized. There was also, as Sir Henry Maine has proved, entire community of lands and goods, and the individual possessed no personal rights as against the interests of the clan. And let us note, in conclusion, that this state of things, while chiefly brought about by the process of direct equilibration above described, is just that which natural selection must assist and maintain so long as the incipient community is small and encompassed by dangers.

Thus we cross the chasm which divides animality from humanity, gregariousness from sociality, hedonism from morality, the sense of pleasure and pain from the sense of right and wrong. For note that by the time integration has resulted in the establishment of a permanent family group with definite relationships between the members, the incentives to action in each member of the group have become quite different from what they were in a state of mere gregariousness. Sympathy, or the power of ideally reproducing in one's self the pleasures and pains of another person, is manifested in a rudimentary form by all gregarious animals of moderate intelligence. Not unfrequently, as Mr. Darwin shows, a baboon has been known to risk his life to save that of a comrade ; and the higher apes habitually take under their care young orphans of their own species. It is evident that this power of sympathy must be strengthened and further developed when a number of individuals are brought into closer and more enduring relationships, even though these come far short of what, from our modern ethical standard, would be termed loving. Affection in the savage clan is but partially preventive of fiendish cruelty ; yet there is an ability in the members to understand each other's feelings, and there is a desire for the approbation of fellow-clansmen. Kinship in blood, as well as community of pursuits and interests, promotes these feelings. Even to-day we can usually understand the mental habits, desires, and repugnances of our own immediate kindred better than we can understand those of other people unrelated to us, even though circumstances may now and then have led us to prefer the society of the latter. We can more readily admire their excellences and condone their faults, for their faults and excellences are likely to be in a measure our own.

Given this rudimentary capacity of sympathy, we can see how family integration must alter and complicate the emotional incentives to action. While the individual may still exercise his brute-like predatory instincts upon strangers and lower animals, and will, indeed, be more highly approved the more he does so, on the other hand there is a curb upon his exercise of them within the limits of the clan. There is a nascent public opinion which

lauds actions beneficial to the clan, and frowns upon actions detrimental to it; though for this it is not necessary that there should be a generalization of the effects of certain actions, any more than a generalization of the effects of hunger is needed to insure the individual's approval of eating. The mere present sense of collective pleasure or pain is enough to organize the complex feeling. For example, when a marauding expedition upon a neighboring clan is defeated by the cowardice or treachery of one of the party, the offender is perhaps beaten, kicked, or killed. The present sense of collective pain immediately prompts the actions which tend to repress the cowardice or treachery. On the other hand, the pleasurable states which result in all the members of the clan, in common, after an exhibition of successful bravery, immediately generate approval of the man who is brave, along with the desire to imitate him. In short, to quote Mr. Spencer, one of the things that comes to be strongly associated in the mind of the young savage with marks of approval, "which are symbolical of pleasures in general, is courage; and one of the things that comes to be associated in his mind with frowns and other marks of enmity, which form his symbol of unhappiness, is cowardice. These feelings are not formed in him because he has reasoned his way to the truth that courage is useful to his tribe, and by implication to himself, or to the truth that cowardice is a cause of evil. In adult life he may, perhaps, see this; but he certainly does not see it at the time when bravery is thus associated in his consciousness with all that is good, and cowardice with all that is bad. Similarly, there are produced in him feelings of inclination or repugnance towards other lines of conduct that have become established or interdicted because they are beneficial or injurious to the tribe; though neither the young nor the adults know why they have become established or interdicted. Instance the praiseworthiness of wife-stealing and the viciousness of marrying within the tribe." In these ways the establishment of permanent family relationships generates new incentives to action, unknown in the previous epoch of mere gregariousness, which must often, and in some instances habitually, overrule the mere animal incentives

comprised in personal pleasures and pains. The good of the individual must begin to yield to the good of the community.

The explanation, as I have shown, is to be found in that gradual prolongation of the period of infancy, which is one of the consequences, as yet but partially understood, of increasing intelligence. Let us observe the causal connections so far as we can trace them out, recalling some of the conclusions reached in the chapter on the Evolution of Mind.

In an animal whose relations with its environment are very simple, resulting in an experience which is but slightly varied, the combinations of acts requisite for supporting life take place with a regularity and monotony approaching the monotonous regularity with which the functions of the viscera are performed. Hence the tendency to perform these actions is completely established at birth in each individual, just as the tendency of the viscera to perform their several functions is preëstablished, all that is required in addition being simply the direct stimulus of outward physical opportunity. And the psychical life of such an animal we call purely instinctive or automatic. In such an animal the organized experience of the race counts for everything, the experience of the individual for nothing, save as contributing its mite towards the cumulated experience of the race. But in an animal whose relations with its environment are very complex, resulting in an experience which is necessarily varied to a considerable extent from generation to generation, the combinations of acts requisite for supporting life must occur severally with far less frequency than in the case of the lower animal just considered. Hence the tendency to perform any particular group of these actions will *not* be completely established at birth in each individual, like the tendency of the viscera to perform these several functions. On the other hand, there will be a multitude of conflicting tendencies, and it will be left for the circumstances subsequent to birth to determine which groups of tendencies shall be carried out into action. The psychical life of such an animal is no longer purely automatic or instinctive. A portion of its life is spent in giving direction to its future career,

and in thus further modifying the inherited tendencies with which its offspring start in life. In such an animal the organized experience of the race counts for much, but the special experience of the individual counts for something in altering the future career of the race. Such an animal is capable of psychical progress, and such an animal must begin life not with matured faculties but as an infant. Instead of a few actually realized capacities, it starts with a host of potential capacities, of which the play of circumstance must determine what ones shall be realizable.

Manifestly, therefore, the very state of things which made psychical variation more advantageous to the progenitors of mankind than physical variation, this very state of things simultaneously conspired to enhance the progressiveness of primeval man and to prolong the period of his infancy, until the plastic or malleable part of his life came to extend over several years instead of terminating in rigidity in the course of four or five months, as with the orang-outang. Upon the consequences of this state of things, in gradually bringing about that capacity for progress which distinguishes man from all lower animals, I need not further enlarge. What we have here especially to note, amid the entanglement of all these causes conspiring to educe humanity from animality, is the fact, illustrated above, that this prolongation of infancy was manifestly the circumstance which knit those permanent relationships, giving rise to reciprocal necessities of behavior, which distinguish the rudest imaginable family group of men from the highest imaginable association of gregarious nonhuman Primates.

Additional References :

Herbert Spencer, *The Factors of Organic Evolution*, in *Essays: Scientific, Political, and Speculative*, Vol. I. Geddes and Thompson, *The Evolution of Sex*, chaps. i, ii, xix, xxi. Robert Mackintosh, *From Comte to Benjamin Kidd*. August Weismann, *The Germ Plasm : a Theory of Heredity*. George John Romanes, *An Examination of Weismannism*. Alfred Russell Wallace, *Studies: Scientific and Social*. R. L. Dugdale, *The Jukes*. Oscar C. McCulloh, *The Tribe of Ishmael*. Arthur Fairbanks, *Introduction to Sociology*, Part III. H. W. Conn, *The Method of Evolution*.

B. THE PSYCHICAL FACTORS

XV

COMPARISON OF MORAL AND INTELLECTUAL LAWS AND INQUIRY AS TO THE INFLUENCE OF EACH ON THE PROGRESS OF SOCIETY¹

It has, I trust, been made apparent that whatever may hereafter be the case, we, looking merely at the present state of our knowledge, must pronounce the metaphysical method to be unequal to the task, often imposed upon it, of discovering the laws which regulate the movements of the human mind. We are therefore driven to the only remaining method, according to which mental phenomena are to be studied, not simply as they appear in the mind of the individual observer but as they appear in the actions of mankind at large. The essential opposition between these two plans is very obvious ; but it may perhaps be well to bring forward further illustration of the resources possessed by each for the investigation of truth ; and for this purpose I will select a subject which, though still imperfectly understood, supplies a beautiful instance of the regularity with which, under the most conflicting circumstances, the great laws of nature are able to hold their course.

The case to which I refer is that of the proportion kept up in the births of the sexes, — a proportion which, if it were to be greatly disturbed in any country, even for a single generation, would throw society into the most serious confusion, and would infallibly cause a great increase in the vices of the people.² Now it

¹ From *The History of Civilization in England*, by Henry Thomas Buckle, chap. iv.

² Thus we find that the Crusades, by diminishing the proportion of men to women in Europe, increased licentiousness. See a curious passage in Sprengel, *Histoire de la Médecine*, Vol. II, p. 376. In Yucatan there is generally a considerable excess of women, and the result is prejudicial to morals (Stephens'

has always been suspected that on an average the male and female births are tolerably equal; but until very recently no one could tell whether or not they are precisely equal, or, if unequal, on which side there is an excess.¹ The births being the physical result of physical antecedents, it was clearly seen that the laws of the births must be in those antecedents; that is to say, that the causes of the proportion of the sexes must reside in the parents themselves.² Under these circumstances the question arose, if it was not possible to elucidate this difficulty by our knowledge of animal physiology; for it was plausibly said, "Since physiology is a study of the laws of the body,³ and since all births are products resulting from the body, it follows that if we know the laws of the body, we shall know the laws of the birth." This was the view taken by physiologists of our origin;⁴ and this is

Central America, Vol. III, pp. 380, 429). On the other hand, respecting the state of society produced by an excess of males, see Mallet's *Northern Antiquities*, p. 259; *Journal of Geographical Society*, Vol. XV, p. 45; Vol. XVI, p. 307; Southey's *Commonplace Book*, third series, p. 579.

¹ On this question a variety of conflicting statements may be seen in the older writers. Goodman, early in the seventeenth century, supposed that more females were born than males (Southey's *Commonplace Book*, third series, p. 696). Turgot (*Œuvres*, Vol. II, p. 247) rightly says, "Il naît un peu plus d'hommes que de femmes"; but the evidence was too incomplete to make this more than a lucky guess; and I find that even Herder, writing in 1785, takes for granted that the proportion was about equal: "ein ziemliches Gleichmass in den Geburten beider Geschlechter" (*Ideen zur Geschichte*, Vol. II, p. 149); and was sometimes in favor of girls: "ja, die Nachrichten mehrerer Reisenden machen es wahrscheinlich, dass in manchen dieser Gegenden wirklich mehr Töchter als Söhne geboren werden."

² A question, indeed, has been raised as to the influence exercised by the state of the mind during the period of orgasm. But whatever this influence may be, it can only affect the subsequent birth through and by physical antecedents, which in every case must be regarded as the proximate cause. If, therefore, the influence were proved to exist, we should still have to search for physical laws, though such laws would of course be considered merely as secondary ones, resolvable into some higher generalization.

³ Some writers treat physiology as a study of the laws of life. But this, looking at the subject as it now stands, is far too bold a step, and several branches of knowledge will have to be raised from their present empirical state before the phenomena of life can be scientifically investigated. The more rational mode seems to be, to consider physiology and anatomy as correlative, the first forming the dynamical, and the second forming the statical, part of the study of organic structure.

⁴ "Voulez-vous savoir de quoi dépend le sexe des enfants? Fernel vous répond, sur la foi des anciens, qu'il dépend des qualités de la semence du père et de la

precisely the view taken by metaphysicians of our history. Both parties believed that it was possible at once to rise to the cause of the phenomenon, and by studying its laws predict the phenomenon itself. The physiologist said, "By studying individual bodies, and thus ascertaining the laws which regulate the union of the parents, I will discover the proportion of the sexes, because the proportion is merely the result to which the union gives rise." Just in the same way, the metaphysician says, "By studying individual minds, I will ascertain the laws which govern their movements; and in that way I will predict the movements of mankind, which are obviously compounded of the individual movements."¹ These are the expectations which have been confidently held out by physiologists respecting the laws of the sexes, and by metaphysicians respecting the laws of history. Towards the fulfillment, however, of these promises the metaphysicians have done absolutely nothing, nor have the physiologists been more successful, although their views have the support of anatomy, which admits of the employment of direct experiment, a resource unknown to metaphysics. But towards settling the present question, all this availed them nothing; and

mère" (Renouard, *Histoire de la Médecine*, Paris, 1846, Vol. II, p. 106); see also, at p. 185, the opinion of Hippocrates, adopted by Galen; and similar views in Lepelletier, *Physiologie Médicale*, Vol. IV, p. 332, and Sprengel, *Histoire de la Médecine*, Vol. I, pp. 252, 310; Vol. II, p. 115; Vol. IV, p. 62. For further information as to the opinions which have been held respecting the origin of sexes, see Beausobre, *Histoire de Manichée*, Vol. II, p. 417; *Asiatic Researches*, Vol. III, pp. 358, 361; *Vishnu Purana*, p. 349; *Works of Sir William Jones*, Vol. III, p. 126; Ritter's *History of Ancient Philosophy*, Vol. III, p. 191; Denham and Clapperton's *Africa*, pp. 323, 324; *Maintenon, Lettres Inédites*, Vol. II, p. 62; and the view of Hohl (Burdach, *Physiologie*, Vol. II, p. 472): "que les femmes chez lesquelles prédomine le système artériel procréent des garçons, au lieu que celles dont le système veineux a la prédominance mettent au monde des filles." According to Anaxagoras, the question was extremely simple: *καὶ ἄλλα μὲν ἀπὸ τῶν δεξιῶν, θήλεα δὲ ἀπὸ τῶν ἀριστερῶν* (Diog. Laert., ii, 9, Vol. I, p. 85).

¹ "Le métaphysicien se voit comme la source de l'évidence et le confident de la nature: Moi seul, dit-il, je puis généraliser les idées, et découvrir le germe des événements qui se développent journellement dans le monde physique et moral; et c'est par moi seul que l'homme peut être éclairé" (Helvetius, *De l'Esprit*, Vol. I, p. 86). Compare Herder, *Ideen zur Geschichte der Menschheit*, Vol. II, p. 105. Thus, too, M. Cousin (*Histoire de la Philosophie*, II^e série, Vol. I, p. 131) says, "Le fait de la conscience transporté de l'individu dans l'espèce et dans l'histoire, est la clef de tous les développements de l'humanité."

physiologists are not yet possessed of a single fact which throws any light on this problem : Is the number of male births equal to female births, is it greater, or is it less ?

These are questions to which all the resources of physiologists, from Aristotle down to our own time, afford no means of reply.¹ And yet at the present day we, by the employment of what now seems a very natural method, are possessed of a truth which the united abilities of a long series of eminent men failed to discover. By the simple expedient of registering the number of births and their sexes, — by extending this registration over several years, in different countries, — we have been able to eliminate all casual disturbances and ascertain the existence of a law which, expressed in round numbers, is, that for every twenty girls there are born twenty-one boys ; and we may confidently say that although the operations of this law are of course liable to constant aberrations, the law itself is so powerful that we know of

¹ Considering the very long period during which physiology has been studied, it is remarkable how little the physiologists have contributed towards the great and final object of all science, namely, the power of predicting events. To me it appears that the two principal causes of this are : the backwardness of chemistry, and the still extremely imperfect state of the microscope, which even now is so inaccurate an instrument that when a high power is employed, little confidence can be placed in it ; and the examination, for instance, of the spermatozoa has led to the most contradictory results. In regard to chemistry, MM. Robin and Verdeil, in their recent great work, have ably proved what manifold relations there are between it and the further progress of our knowledge of the animal frame, though I venture to think that these eminent writers have shown occasionally an undue disposition to limit the application of chemical laws to physiological phenomena. See Robin et Verdeil, *Chimie Anatomique et Physiologique*, Vol. I, pp. 20, 34, 167, 337, 338, 437, 661 ; Vol. II, pp. 136, 137, 508 ; Vol. III, pp. 135, 144, 183, 281, 283, 351, 547, Paris, 1853. The increasing tendency of chemistry to bring under its control what are often supposed to be purely organic phenomena is noticed cautiously in Turner's *Chemistry*, Vol. II, p. 1308, London, 1847 ; and boldly in Liebig's *Letters on Chemistry*, 1851, pp. 250, 251. The connection between chemistry and physiology is touched on rather too hastily in Bouilland, *Philosophie Médicale*, pp. 160, 257 ; Broussais, *Examen des Doctrines Médicales*, Vol. III, p. 166 ; Brodie's *Lectures on Pathology*, p. 48 ; Henle, *Traité d'Anatomie*, Vol. I, pp. 25, 26 ; Feuchtersleben's *Medical Psychology*, p. 88 ; but better in Holland's *Medical Notes*, 1839, p. 270, a thoughtful and suggestive work. On the necessity of chemistry for increasing our knowledge of embryology, compare Wagner's *Physiology*, pp. 131, 132, note, with Burdach, *Traité de Physiologie*, Vol. IV, pp. 59, 168.

no country in which during a single year the male births have not been greater than the female ones.¹

The importance and the beautiful regularity of this law make us regret that it still remains an empirical truth, not having yet been connected with the physical phenomena by which its operations are caused.² But this is immaterial to my present purpose, which is only to notice the method by which the discovery has

¹ It used to be supposed that some of the Eastern countries formed an exception to this; but more precise observations have contradicted the loose statements of the earlier travelers, and in no part of the world, so far as our knowledge extends, are more girls born than boys; while in every part of the world for which we have statistical returns, there is a slight excess on the side of male births. Compare Marsden's *History of Sumatra*, p. 234; Raffles' *History of Java*, Vol. I, pp. 81, 82; Sykes on the *Statistics of the Deccan*, in *Reports of British Association*, Vol. VI, pp. 246, 261, 262; Niebuhr, *Description de l'Arabie*, p. 63; Humboldt, *Nouv. Espagne*, Vol. I, p. 139; M'William, *Medical History of Expedition to the Niger*, p. 113; Elliotson's *Human Physiology*, p. 795; Thomson's *History of Royal Society*, p. 531; Sadler's *Law of Population*, Vol. I, pp. 507, 511; Vol. II, pp. 324, 335; Paris and Fonblanque's *Medical Jurisprudence*, Vol. I, p. 259; *Journal of Statistical Society*, Vol. III, pp. 263, 264; Vol. XVII, pp. 46, 123; *Journal of Geographical Society*, Vol. XX, p. 17; *Fourth Report of British Association*, pp. 687, 689; *Report for 1842*, pp. 144, 145; *Transactions of Sections for 1840*, p. 174; for 1847, p. 96; for 1849, p. 87; Dufau, *Traité de Statistique*, pp. 24, 209, 210; Burdach, *Traité de Physiologie*, Vol. II, pp. 56, 57, 273, 274, 281; Vol. V, p. 373; Hawkins' *Medical Statistics*, p. 221, 222.

² In Müller's *Physiology*, Vol. II, p. 1657, a work of great authority, it is said, that "the causes which determine the sex of the embryo are unknown, although it appears that the relative age of the parents has some influence over the sex of the offspring." That the relative age of the parents does affect the sex of their children may, from the immense amount of evidence now collected, be considered almost certain; but M. Müller, instead of referring to physiological writers, ought to have mentioned that the statisticians, and not the physiologists, were the first to make this discovery. On this curious question, see Carpenter's *Human Physiology*, p. 746; Sadler's *Law of Population*, Vol. II, pp. 333, 336, 342; *Journal of Statistical Society*, Vol. III, pp. 263, 264. In regard to animals below man, we find from numerous experiments that among sheep and horses the age of the parents "has a very great general influence upon the sex" of the offspring. (Elliotson's *Physiology*, pp. 708, 709; and see Cuvier, *Progrès des Sciences Naturelles*, Vol. II, p. 406). As to the relation between the origin of sex and the laws of arrested development, compare Geoffroy St.-Hilaire, *Histoire des Anomalies de l'Organisation*, Vol. II, pp. 33, 34, 73; Vol. III, p. 278, with Lindley's *Botany*, Vol. II, p. 81. In Esquirol, *Maladies Mentales*, Vol. I, p. 302, there is a singular case recorded by Lamotte, which would seem to connect this question with pathological phenomena, though it is uncertain whether the epilepsy was an effect or a cognate symptom.

been made. For this method is obviously analogous to that by which I propose to investigate the operations of the human mind, while the old and unsuccessful method is analogous to that employed by the metaphysicians. As long as physiologists attempted to ascertain the laws of the proportion of sexes by individual experiments, they effected absolutely nothing towards the end they hoped to achieve. But when men became dissatisfied with these individual experiments, and instead of them began to collect observations less minute but more comprehensive, then it was that the great law of nature, for which during many centuries they had vainly searched, first became unfolded to their view. Precisely in the same way, as long as the human mind is only studied according to the narrow and contracted method of metaphysicians, we have every reason for thinking that the laws which regulate its movements will remain unknown. If, therefore, we wish to effect anything of real moment, it becomes necessary that we should discard those old schemes, the insufficiency of which is demonstrated by experience as well as by reason; and that we should substitute in their place such a comprehensive survey of facts as will enable us to eliminate those disturbances which, owing to the impossibility of experiment, we shall never be able to isolate.

The desire that I feel to make the preliminary views of this introduction perfectly clear is my sole apology for having introduced a digression which, though adding nothing to the strength of the argument, may be found useful as illustrating it, and will at all events enable ordinary readers to appreciate the value of the proposed method. It now remains for us to ascertain the manner in which, by the application of this method, the laws of mental progress may be most easily discovered.

If, in the first place, we ask what this progress is, the answer seems very simple: that it is a twofold progress, moral and intellectual; the first having more immediate relation to our duties, the second to our knowledge. This is a classification which has been frequently laid down, and with which most persons are familiar. And so far as history is a narration of results, there can be no doubt that the division is perfectly accurate. There

can be no doubt that a people are not really advancing if, on the one hand, their increasing ability is accompanied by increasing vice, or if, on the other hand, while they are becoming more virtuous,* they likewise become more ignorant. This double movement, moral and intellectual, is essential to the very idea of civilization, and includes the entire theory of mental progress. To be willing to perform our duty is the moral part; to know how to perform it is the intellectual part; while the closer these two parts are knit together, the greater the harmony with which they work; and the more accurately the means are adapted to the end, the more completely will the scheme of our life be accomplished, and the more securely shall we lay a foundation for the further advancement of mankind.

A question, therefore, now arises of great moment: namely, Which of these two parts or elements of mental progress is the more important. For the progress itself being the result of their united action, it becomes necessary to ascertain which of them works more powerfully, in order that we may subordinate the inferior element to the laws of the superior one. If the advance of civilization and the general happiness of mankind depend more on their moral feelings than on their intellectual knowledge, we must of course measure the progress of society by those feelings; while if, on the other hand, it depends principally on their knowledge, we must take as our standard the amount and success of their intellectual activity. As soon as we know the relative energy of these two components, we shall treat them according to the usual plan for investigating truth; that is to say, we shall look at the product of their joint action as obeying the laws of the more powerful agent, whose operations are casually disturbed by the inferior laws of the minor agent.†

In entering into this inquiry, we are met by a preliminary difficulty, arising from the loose and careless manner in which

* Moral and intellectual progress are equivalent to two forms of adaptation, — intellectual progress being a greater knowledge of our relation to our environment, and moral progress being adaptation to our social environment. — E.D.

† Compare the motive of self-interest and other disturbing elements in economic life. — E.D.

ordinary language is employed on subjects that require the greatest nicety and precision. For the expression, "moral and intellectual progress," is suggestive of a serious fallacy. In the manner in which it is generally used, it conveys an idea that the moral and intellectual faculties of men are, in the advance of civilization, naturally more acute and more trustworthy than they were formerly. But this, though it may possibly be true, has never been proved. It may be that, owing to some physical causes still unknown, the average capacity of the brain is, if we compare long periods of time, becoming gradually greater; and that therefore the mind, which acts through the brain, is, even independently of education, increasing in aptitude and in the general competence of its views.¹ Such, however, is still our ignorance of physical laws, and so completely are we in the dark as to the circumstances which regulate the hereditary transmission of character, temperament,²

¹ That the natural powers of the human brain are improving because they are capable of transmission is a favorite doctrine with the followers of Gall, and is adopted by M. A. Comte (*Philosophie Positive*, Vol. IV, pp. 384, 385), who, however, admits that it has never been sufficiently verified: "sans que toutefois l'expérience ait encore suffisamment prononcé." Dr. Prichard, whose habits of thought were very different, seems, nevertheless, inclined to lean in this direction, for his comparison of skulls led him to the conclusion that the present inhabitants of Britain, "either as the *result of many ages of greater intellectual cultivation*, or from some other cause, have, as I am persuaded, much more capacious brain cases than their forefathers" (Prichard's *Physical History of Mankind*, Vol. I, p. 305). Even if this were certain, it would not prove that the contents of the crania were altered, though it might create a presumption; and the general question must, I think, remain unsettled until the researches begun by Blumenbach, and recently continued by Morton, are carried out upon a scale far more comprehensive than has hitherto been attempted. Compare Burdach, *Traité de Physiologie*, Vol. II, p. 253, where, however, the question is not stated with sufficient caution.

² None of the laws of hereditary descent connected with the formation of character have yet been generalized, nor is our knowledge much more advanced respecting the theory of temperaments, which still remains the principal obstacle in the way of the phrenologists. The difficulties attending the study of temperaments, and the obscurity in which this important subject is shrouded, may be estimated by whoever will compare what has been said upon it by the following writers: Müller's *Physiology*, Vol. II, pp. 1406-1410; Elliotson's *Human Physiology*, pp. 1059-1062; Blainville, *Physiologie Générale et Comparée*, Vol. I, pp. 168, 264, 265; Vol. II, pp. 43, 130, 214, 328, 329; Vol. III, pp. 54, 74, 118, 148, 149, 284, 285; Williams' *Principles of Medicine*, pp. 16, 17, 112, 113; Geoffroy St.-Hilaire, *Anomalies de l'Organisation*, Vol. I, pp. 186, 190; Broussais,

and other personal peculiarities, that we must consider this alleged progress as a very doubtful point; and in the present state of our knowledge we cannot safely assume that there has been any permanent improvement in the moral or intellectual faculties of man, nor have we any decisive ground for saying that these faculties are likely to be greater in an infant born in the most civilized part of Europe than in one born in the wildest region of a barbarous country.¹

Examen des Doctrines Médicales, Vol. I, pp. 204, 205; Vol. III, p. 276; Renouard, *Histoire de la Médecine*, Vol. I, p. 326; Sprengel, *Histoire de la Médecine*, Vol. I, p. 380; Vol. II, p. 408; Vol. III, p. 21; Vol. V, p. 325; Vol. VI, p. 492; Esquirol, *Maladies Mentales*, Vol. I, pp. 39, 226, 429, 594; Vol. II, p. 29; Lepelletier, *Physiologie Médicale*, Vol. I, pp. 139, 281; Vol. III, pp. 372-429; Vol. IV, pp. 93, 123, 133, 143, 148, 177; Henle, *Anatomie Générale*, Vol. I, p. 474; Vol. II, pp. 288, 289, 316; Bichat, *Anatomie Générale*, Vol. I, p. 207; Vol. II, p. 444; Vol. III, pp. 310, 507; Vol. IV, pp. 281, 399, 400, 504; Bichat, *Sur la Vie*, pp. 80, 81, 234, 235; Phillips on Scrofula, p. 9; Feuchtersleben's *Medical Psychology*, pp. 143-145; *Œuvres de Fontenelle*, Vol. V, p. 110, Paris, 1766; Cullen's *Works*, Vol. I, pp. 214-221, Edinburgh, 1827; Cabanis, *Rapports du Physique et du Moral*, pp. 76-83, 229-261, 520-533; Noble on the Brain, pp. 370-376; Combe's *North America*, Vol. I, pp. 126-128. Latterly, attention has been paid to the chemistry of the blood as it varies in the various temperaments; and this seems a more satisfactory method than the old plan of merely describing the obvious symptoms of the temperament. Clark on Animal Physiology, in *Fourth Report of the British Association*, p. 126; Simon's *Animal Chemistry*, Vol. I, p. 236; Wagner's *Physiology*, p. 262.

¹ We often hear of hereditary talents, hereditary vices, and hereditary virtues; but whoever will critically examine the evidence will find that we have no proof of their existence. The way in which they are commonly proved is in the highest degree illogical, the usual course being for writers to collect instances of some mental peculiarity found in a parent and in his child, and then to infer that the peculiarity was bequeathed. By this mode of reasoning we might demonstrate any proposition, since in all large fields of inquiry there are a sufficient number of empirical coincidences to make a plausible case in favor of whatever view a man chooses to advocate. But this is not the way in which truth is discovered; and we ought to inquire not only how many instances there are of hereditary talents, etc., but how many instances there are of such qualities not being hereditary. Until something of this sort is attempted, we can know nothing about the matter inductively; while until physiology and chemistry are much more advanced we can know nothing about it deductively.

These considerations ought to prevent us from receiving statements (Taylor's *Medical Jurisprudence*, pp. 644, 678, and many other books) which positively affirm the existence of hereditary madness and hereditary suicide; and the same remark applies to hereditary disease (on which see some admirable observations in Phillips on Scrofula, pp. 101-120, London, 1846); and with still greater force

Whatever, therefore, the moral and intellectual progress of men may be, it resolves itself not into a progress of natural capacity¹ but into a progress, if I may so say, of opportunity; that is, an improvement in the circumstances under which that capacity after birth comes into play. Here, then, lies the gist of the whole matter. The progress is one not of internal power but of external advantage. The child born in a civilized land is not likely, as such, to be superior to one born among barbarians; and the difference which ensues between the acts of the two children will be caused, so far as we know, solely by the pressure of external circumstances; by which I mean the surrounding opinions, knowledge, associations, — in a word, the entire mental atmosphere in which the two children are respectively nurtured.*

On this account it is evident that if we look at mankind in the aggregate, their moral and intellectual conduct is regulated by the moral and intellectual notions prevalent in their own time. There are, of course, many persons who will rise above those notions, and many others who will sink below them. But such cases are exceptional, and form a very small proportion of the total amount of those who are nowise remarkable either for

does it apply to hereditary vices and hereditary virtues inasmuch as ethical phenomena have not been registered as carefully as physiological ones, and therefore our conclusions respecting them are even more precarious.

¹ To what has been already stated, I will add the opinions of two of the most profound among modern thinkers. "Men, I think, have been much the same for natural endowments in all times." "Conduct of the Understanding," in Locke's Works, Vol. II, p. 361. "Les dispositions primitives agissent également chez les peuples barbares et chez les peuples policés; ils sont vraisemblablement les mêmes dans tous les lieux et dans tous les temps. . . . Plus il y aura d'hommes, et plus vous aurez de grands hommes ou d'hommes propres à devenir grands." "Progrès de l'Esprit Humain," in Œuvres de Turgot, Vol. II, p. 264. The remarks of Dr. Brown (Lectures on the Mind, p. 57), if I rightly understand his rhetorical language, apply not to natural capacity, but to that which is acquired: see the end of his ninth lecture.

* Is it not probable that the capacities of men change to suit the change of conditions, even though they do not become absolutely superior? It may be that the mental capacity of the savage is as great, speaking absolutely, as that of the civilized man; but while his mental capacity fits him for the conditions of savage life, it might not fit him for the conditions of civilized life. By way of illustration, the physical structure of the seal may be as perfect as that of the dog, but the seal could not live on land as well as the dog. — ED.

good or for evil. An immense majority of men must always remain in a middle state, neither very foolish nor very able, neither very virtuous nor very vicious, but slumbering on in a peaceful and decent mediocrity, adopting without much difficulty the current opinions of the day, making no inquiry, exciting no scandal, causing no wonder, just holding themselves on a level with their generation, and noiselessly conforming to the standard of morals and of knowledge common to the age and country in which they live.

Now it requires but a superficial acquaintance with history to be aware that this standard is constantly changing, and that it is never precisely the same even in the most similar countries, or in two successive generations in the same country. The opinions which are popular in any nation vary in many respects almost from year to year ; and what in one period is attacked as a paradox or a heresy is in another period welcomed as a sober truth, which, however, in its turn is replaced by some subsequent novelty. This extreme mutability in the ordinary standard of human actions shows that the conditions on which the standard depends must themselves be very mutable ; and those conditions, whatever they may be, are evidently the originators of the moral and intellectual conduct of the great average of mankind.

Here, then, we have a basis on which we can safely proceed. We know that the main cause of human actions is extremely variable ; we have only, therefore, to apply this test to any set of circumstances which are supposed to be the cause, and if we find that such circumstances are not very variable, we must infer that they are not the cause we are attempting to discover.

Applying this test to moral motives, or to the dictates of what is called moral instinct, we shall at once see how extremely small is the influence those motives have exercised over the progress of civilization. For there is, unquestionably, nothing to be found in the world which has undergone so little change as those great dogmas of which moral systems are composed. To do good to others ; to sacrifice for their benefit your own wishes ; to love your neighbor as yourself ; to forgive your enemies ; to restrain your passions ; to honor your parents ; to respect those who are

set over you, — these and a few others are the sole essentials of morals; but they have been known for thousands of years, and not one jot or tittle has been added to them by all the sermons, homilies, and text-books which moralists and theologians have been able to produce.¹

But if we contrast this stationary aspect of moral truths with the progressive aspect of intellectual truths, the difference is indeed startling.² All the great moral systems which have exercised much influence have been fundamentally the same; all the

¹ That the system of morals propounded in the New Testament contained no maxim which had not been previously enunciated, and that some of the most beautiful passages in the Apostolic writings are quotations from pagan authors, is well known to every scholar; and so far from supplying, as some suppose, an objection against Christianity, it is a strong recommendation of it, as indicating the intimate relation between the doctrines of Christ and the moral sympathies of mankind in different ages. But to assert that Christianity communicated to man moral truths previously unknown argues, on the part of the assertor, either gross ignorance or else willful fraud. For evidence of the knowledge of moral truths possessed by barbarous nations, independently of Christianity, and for the most part previous to its promulgation, compare Mackay's *Religious Development*, Vol. II, pp. 376–380; Mure's *History of Greek Literature*, Vol. II, p. 398; Vol. III, p. 380; Prescott's *History of Mexico*, Vol. I, p. 31; Elphinstone's *History of India*, p. 47; Works of Sir W. Jones, Vol. I, pp. 87, 168; Vol. III, pp. 105, 114; Mill's *History of India*, Vol. I, p. 419; Bohlen, *Das alte Indien*, Vol. I, pp. 364–366; Beausobre, *Histoire de Manichée*, Vol. I, pp. 318, 319; Coleman's *Mythology of the Hindus*, p. 193; *Transactions of Society of Bombay*, Vol. III, p. 198; *Transactions of Asiatic Society*, Vol. I, p. 5; Vol. III, pp. 283, 284; *Asiatic Researches*, Vol. VI, p. 271; Vol. VII, p. 40; Vol. XVI, pp. 130, 277; Vol. XX, pp. 460, 461; *The Dabistan*, Vol. I, pp. 328, 338; Catlin's *North American Indians*, Vol. II, p. 243; Syme's *Embassy to Ava*, Vol. II, p. 389; Davis' *Chinese*, Vol. I, p. 196; Vol. II, pp. 136, 233; *Journal Asiatique*, I. série, Vol. IV, p. 77, Paris, 1824.

² Sir James Mackintosh was so struck by the stationary character of moral principles that he denies the possibility of their advance, and boldly affirms that no further discoveries can be made in morals: "Morality admits no discoveries. . . . More than three thousand years have elapsed since the composition of the Pentateuch; and let any man, if he is able, tell me in what important respect the rule of life has varied since that distant period. Let the Institutes of Manu be explored with the same view; we shall arrive at the same conclusion. Let the books of false religion be opened; it will be found that their moral system is, in all its grand features, the same. . . . The fact is evident that no improvements have been made in practical morality. . . . The facts which lead to the formation of moral rules are as accessible, and must be as obvious, to the simplest barbarian as to the most enlightened philosopher. . . . The case of the physical and speculative sciences is directly opposite. There the facts are remote and scarcely

great intellectual systems have been fundamentally different. In reference to our moral conduct, there is not a single principle now known to the most cultivated Europeans which was not likewise known to the ancients. In reference to the conduct of our intellect, the moderns have not only made the most important additions to every department of knowledge that the ancients ever attempted to study, but besides this, they have upset and revolutionized the old methods of inquiry; they have consolidated into one great scheme all those resources of induction which Aristotle alone dimly perceived; and they have created sciences, the faintest idea of which never entered the mind of the boldest thinker antiquity produced.

These are, to every educated man, recognized and notorious facts; and the inference to be drawn from them is immediately obvious. Since civilization is the product of moral and intellectual agencies, and since that product is constantly changing, it evidently cannot be regulated by the stationary agent, because, when surrounding circumstances are unchanged a stationary agent can only produce a stationary effect. The only other agent is the intellectual one; and that this is the real mover may be proved in two distinct ways: first, because being, as we have already seen, either moral or intellectual, and being, as we have also seen, not moral, it must be intellectual; and secondly, because the intellectual principle has an activity and a capacity for adaptation, which, as I undertake to show, is quite sufficient to account for the extraordinary progress that, during several centuries, Europe has continued to make.

Such are the main arguments by which my view is supported; but there are also other and collateral circumstances which are well worthy of consideration. The first is, that the intellectual

accessible. . . . From the countless variety of the facts with which they are conversant, it is impossible to prescribe any bounds to their future improvement. It is otherwise with morals. They have hitherto been stationary; and, in my opinion, they are likely forever to continue so" (*Life of Mackintosh*, edited by his son, Vol. I, pp. 119-122, London, 1835). Condorcet (*Vie de Turgot*, p. 180) says, "*La morale de toutes les nations a été la même*"; and Kant (*Logik*, in Kant's *Werke*, Vol. I, p. 356), "*In der Moral-philosophie sind wir nicht weiter gekommen, als die Alten.*"

principle is not only far more progressive than the moral principle but is also far more permanent in its results. The acquisitions made by the intellect are, in every civilized country, carefully preserved, registered in certain well-understood formulas, and protected by the use of technical and scientific language; they are easily handed down from one generation to another, and thus assuming an accessible or, as it were, a tangible form, they often influence the most distant posterity, they become the heirlooms of mankind, the immortal bequest of the genius to which they owe their birth. But the good deeds effected by our moral faculties are less capable of transmission; they are of a more private and retiring character; while as the motives to which they owe their origin are generally the result of self-discipline and of self-sacrifice, they have to be worked out by every man for himself; and thus, begun by each anew, they derive little benefit from the maxims of preceding experience, nor can they well be stored up for the use of future moralists. The consequence is, that although moral excellence is more amiable, and to most persons more attractive, than intellectual excellence, still it must be confessed that, looking at ulterior results, it is far less active, less permanent, and, as I shall presently prove, less productive of real good. Indeed, if we examine the effects of the most active philanthropy, and of the largest and most disinterested kindness, we shall find that those effects are, comparatively speaking, short-lived; that there is only a small number of individuals they come in contact with and benefit; that they rarely survive the generation which witnessed their commencement; and that when they take the more durable form of founding great public charities, such institutions invariably fall, first into abuse, then into decay, and after a time are either destroyed, or perverted from their original intention, mocking the effort by which it is vainly attempted to perpetuate the memory even of the purest and most energetic benevolence.

These conclusions are no doubt very unpalatable; and what makes them peculiarly offensive is that it is impossible to refute them. For the deeper we penetrate into this question, the more clearly shall we see the superiority of intellectual acquisitions

over moral feeling.¹ There is no instance on record of an ignorant man who having good intentions and supreme power to enforce them has not done far more evil than good. And whenever the intentions have been very eager, and the power very extensive, the evil has been enormous. But if you can diminish the sincerity of that man, if you can mix some alloy with his motives, you will likewise diminish the evil which he works. If he is selfish as well as ignorant, it will often happen that you may play off his vice against his ignorance, and by exciting his fears restrain his mischief. If, however, he has no fear, if he is entirely unselfish, if his sole object is the good of others, if he pursues that object with enthusiasm upon a large scale and with disinterested zeal, then it is that you have no check upon him, you have no means of preventing the calamities which, in an ignorant age, an ignorant man will be sure to inflict. How entirely this is verified by experience we may see in studying the history of religious persecution. To punish even a single man for his religious tenets is assuredly a crime of the deepest dye; but to punish a large body of men, to persecute an entire sect, to attempt to extirpate opinions which, growing out of the state of society in which they arise, are themselves a manifestation of the marvelous and luxuriant fertility of the human mind, — to do this is not only one of the most pernicious but one of the most foolish acts that can possibly be conceived. Nevertheless, it is an undoubted fact that an overwhelming majority of religious persecutors have been men of the purest intentions, of the most admirable and unsullied morals. It is impossible that this should be otherwise; for they are not bad-intentioned men who seek to enforce opinions which they believe to be good. Still less are they bad men who are so regardless of temporal considerations as to employ all the resources of their power not for their own benefit but for the purpose of propagating a religion which they think necessary to the future happiness of mankind. Such men as these are not bad, they are only ignorant, — ignorant of the nature of truth, ignorant of the

¹ One part of the argument is well stated by Cuvier, who says, "*Le bien que l'on fait aux hommes, quelque grand qu'il soit, est toujours passager; les vérités qu'on leur laisse sont éternelles*" (Cuvier, *Éloges Historiques*, Vol. II, p. 304).

consequences of their own acts. But in a moral point of view their motives are unimpeachable. Indeed, it is the very ardor of their sincerity which warms them into persecution. It is the holy zeal by which they are fired that quickens their fanaticism into a deadly activity. If you can impress any man with an absorbing conviction of the supreme importance of some moral or religious doctrine; if you can make him believe that those who reject that doctrine are doomed to eternal perdition; if you then give that man power, and by means of his ignorance blind him to the ulterior consequences of his own act,—he will infallibly persecute those who deny his doctrine; and the extent of his persecution will be regulated by the extent of his sincerity. Diminish the sincerity, and you will diminish the persecution; in other words, by weakening the virtue you may check the evil. This is a truth of which history furnishes such innumerable examples that to deny it would be not only to reject the plainest and most conclusive arguments but to refuse the concurrent testimony of every age. I will merely select two cases, which from the entire difference in their circumstances are very apposite as illustrations: the first being from the history of paganism, the other from the history of Christianity, and both proving the inability of moral feelings to control religious persecution.

1. The Roman emperors, as is well known, subjected the early Christians to persecutions, which, though they have been exaggerated, were frequent and very grievous. But what to some persons must appear extremely strange is that among the active authors of these cruelties we find the names of the best men who ever sat on the throne; while the worst and most infamous princes were precisely those who spared the Christians and took no heed of their increase. The two most thoroughly depraved of all the emperors were certainly Commodus and Elagabalus; neither of whom persecuted the new religion, or indeed adopted any measures against it. They were too reckless of the future, too selfish, too absorbed in their own infamous pleasures, to mind whether truth or error prevailed; and being thus indifferent to the welfare of their subjects, they cared nothing about the progress of a creed, which they, as pagan

emperors, were bound to regard as a fatal and impious delusion. They therefore allowed Christianity to run its course, unchecked by those penal laws which more honest but more mistaken rulers would assuredly have enacted.¹ We find, accordingly, that the great enemy of Christianity was Marcus Aurelius, a man of kindly temper and of fearless, unflinching honesty, but whose reign was characterized by a persecution from which he would have refrained had he been less in earnest about the religion of his fathers.² And to complete the argument, it may be added that the last and one of the most strenuous of the opponents of Christianity who occupied the throne of the Cæsars was Julian,—a prince of eminent probity, whose opinions are often attacked, but against whose moral conduct even calumny itself has hardly breathed a suspicion.³

¹ "The first year of Commodus must be the epocha of the toleration. From all these authorities it appears beyond exception that Commodus put a stop to the persecution in the first year of his reign. . . . Not one writer, either heathen or Christian, makes Commodus a persecutor" ("Letters concerning the Thundering Legion," in Moyle's Works, Vol. II, p. 266, London, 1726). "Heliogabalus also, though in other respects the most infamous of all princes, and perhaps the most odious of all mortals, showed no marks of bitterness or aversion, to the disciples of Jesus" (Mosheim's Ecclesiastical History, Vol. I, p. 66). See also Milman's History of Christianity, Vol. II, p. 225, London, 1840.

² Dr. Milman (History of Christianity, 1840, Vol. II, p. 159) says: "A blameless disciple in the severest school of philosophic morality, the austerity of Marcus rivaled that of the Christians in its contempt of the follies and diversions of life; yet his native kindliness of disposition was not hardened or embittered by the severity or the pride of his philosophy. With Aurelius, nevertheless, Christianity found not only a fair and high-minded competitor for the command of the human mind; not only a rival in the exaltation of the soul of man to higher views and more dignified motives; but a violent and intolerant persecutor." M. Guizot compares him with Louis IX of France; and certainly there was in both an evident connection between sincerity and persecution: "Marc Aurèle et saint Louis sont peut-être les deux seuls princes qui, en toute occasion, aient fait de leurs croyances morales la première règle de leur conduite: Marc Aurèle, stoicien; saint Louis, chrétien" (Guizot, Civilisation en France, Vol. IV, p. 142). Even Duplessis-Mornay (Mém., Vol. IV, p. 374) calls him "le meilleur des empereurs païens"; and Ritter (History of Philosophy, Vol. IV, p. 222), "the virtuous and noble emperor."

³ Neander (History of the Church, Vol. I, p. 122) observes, that the best emperors opposed Christianity, and that the worst ones were indifferent to its encroachments. The same remark, in regard to Marcus and Commodus, is made by Gibbon (Decline and Fall, chap. xvi, p. 220, London, 1836). Another writer,

2. The second illustration is supplied by Spain,—a country of which it must be confessed that in no other have religious feelings exercised such sway over the affairs of men. No other European nation has produced so many ardent and disinterested missionaries, zealous, self-denying martyrs, who have cheerfully sacrificed their lives in order to propagate truths which they thought necessary to be known. Nowhere else have the spiritual classes been so long in the ascendant; nowhere else are the people so devout, the churches so crowded, the clergy so numerous. But the sincerity and the honesty of purpose by which the Spanish people, taken as a whole, have always been marked, have not only been unable to prevent religious persecution but have proved the means of encouraging it. If the nation had been more lukewarm, it would have been more tolerant. As it was, the preservation of the faith became the first consideration; and everything being sacrificed to this one object, it naturally happened that zeal begat cruelty, and the soil was prepared in which the Inquisition took root and flourished. The supporters of that barbarous institution were not hypocrites but enthusiasts. Hypocrites are for the most part too supple to be cruel. For cruelty is a stern and unbending passion; while hypocrisy is a fawning and flexible art, which accommodates itself to human feelings, and flatters the weakness of men in order that it may gain its own ends. In Spain the earnestness of the nation being concentrated on a single topic carried everything before it; and hatred of heresy becoming a habit, persecution of heresy was thought a duty. The conscientious energy with which that duty was fulfilled is seen in the history of the Spanish Church. Indeed, that the inquisitors were remarkable for an undeviating and incorruptible integrity may be proved in a variety of ways and from different and independent sources of evidence. This is a question to which I shall hereafter return; but there are two testimonies which I cannot omit because, from the circumstances attending them,

of a very different character, ascribes this peculiarity to the wiles of the devil: "In the primitive times it is observed that the best emperors were some of them stirred up by Satan to be the bitterest persecutors of the Church" (*Memoirs of Colonel Hutchinson*, p. 85).

they are peculiarly unimpeachable. Llorente, the great historian of the Inquisition, and its bitter enemy, had access to its private papers; and yet, with the fullest means of information, he does not even insinuate a charge against the moral character of the inquisitors; but while execrating the cruelty of their conduct, he cannot deny the purity of their intentions.¹ Thirty years earlier, Townsend, a clergyman of the Church of England, published his valuable work on Spain;² and though as a Protestant and an Englishman he had every reason to be prejudiced against the infamous system which he describes, he also can bring no charge against those who upheld it; but having occasion to mention its establishment at Barcelona, one of its most important branches, he makes the remarkable admission, that all its members are men of worth, and that most of them are of distinguished humanity.³

These facts, startling as they are, form a very small part of that vast mass of evidence which history contains, and which decisively proves the utter inability of moral feelings to diminish religious persecution. The way in which the diminution has been really effected by the mere progress of intellectual acquirements will be pointed out in another part of this volume, when we shall see that the great antagonist of intolerance is not humanity but knowledge. It is to the diffusion of knowledge, and to that alone, that we owe the comparative cessation of what is unquestionably the greatest evil men have ever inflicted on their own species. For that religious persecution is a greater evil than any

¹ By which, indeed, he is sorely puzzled. "On reconnaitra mon impartialité dans quelques circonstances où je fais remarquer chez les inquisiteurs des dispositions généreuses; ce qui me porte à croire que les atroces sentences rendues par le Saint-Office sont plutôt une conséquence de ses lois organiques, qu'un effet du caractère particulier de ses membres" (Llorente, *Histoire Critique de l'Inquisition d'Espagne*, Vol. I, p. xxiii). Compare *ibid.*, Vol. II, pp. 267, 268; Vol. IV, p. 153.

² Highly spoken of by the late Blanco White, a most competent judge. See Doblado's *Letters from Spain*, p. 5.

³ "It is, however, universally acknowledged, for the credit of the corps at Barcelona, that all its members are men of worth, and most of them distinguished for humanity" (Townsend's *Journey through Spain in 1786 and 1787*, Vol. I, p. 122, London, 1792).

other is apparent not so much from the enormous and almost incredible number of its known victims¹ as from the fact that the unknown must be far more numerous, and that history gives no account of those who have been spared in the body in order that they might suffer in the mind. We hear much of martyrs and confessors, — of those who were slain by the sword, or consumed in the fire ; but we know little of that still larger number who by the mere threat of persecution have been driven into an outward abandonment of their real opinions, and who, thus forced into an apostasy the heart abhors, have passed the remainder of their life in the practice of a constant and humiliating hypocrisy. It is this which is the real curse of religious persecution. For in this way, men being constrained to mask their thoughts, there arises a habit of securing safety by falsehood, and of purchasing impunity with deceit. In this way fraud becomes a necessary of life ; insincerity is made a daily custom ; the whole tone of public feeling is vitiated, and the gross amount of vice and of error fearfully increased. Surely, then, we have reason to say that, compared to this, all other crimes are of small account ; and we may well be grateful for that increase of intellectual pursuits which has destroyed an evil that some among us would even now willingly restore.

The principle I am advocating is of such immense importance in practice as well as in theory that I will give yet another instance of the energy with which it works. The second greatest evil known to mankind — the one by which, with the exception

¹ In 1546 the Venetian ambassador at the court of the emperor Charles V stated, in an official report to his own government on his return home, "that in Holland and in Friesland more than 30,000 persons have suffered death at the hands of justice for Anabaptist errors" (Correspondence of Charles V and his Ambassadors, edited by William Bradford, 8vo, p. 471, London, 1850). In Spain the Inquisition, during the eighteen years of Torquemada's ministry, punished, according to the lowest estimate, upwards of 105,000 persons, of whom 8800 were burned (Prescott's *History of Ferdinand and Isabella*, Vol. I, p. 265). In Andalusia alone, during a single year, the Inquisition put to death 2000 Jews, "besides 17,000 who underwent some form of punishment less severe than that of the stake" (Ticknor's *History of Spanish Literature*, Vol. I, p. 410). For other statistical evidence on this horrible subject, see Llorente, *Histoire de l'Inquisition*, Vol. I, pp. 160, 229, 238, 239, 279, 280, 406, 407, 455 ; Vol. II, pp. 77, 116, 376 ; Vol. IV, p. 31 ; and, above all, the summary at pp. 242-273.

of religious persecution, most suffering has been caused — is unquestionably the practice of war. That this barbarous pursuit is, in the progress of society, steadily declining must be evident, even to the most hasty reader of European history.¹ If we compare one century with another, we shall find that for a very long period wars have been becoming less frequent, and now so clearly is the movement marked that until the late commencement of hostilities we had remained at peace for nearly forty years, — a circumstance unparalleled not only in our own country but also in the annals of every other country which has been important enough to play a leading part in the affairs of the world.² The question arises as to what share our moral feelings have had in bringing about this great improvement. And if this question is answered not according to preconceived opinions but according to the evidence we possess, the answer will certainly be, that those feelings have had no share at all. For it surely will not be pretended that the moderns have made any discoveries respecting the moral evils of war. On this head nothing is now known that has not been known for many centuries. That defensive wars are just, and that offensive wars are unjust, are the only two principles which, on this subject, moralists are able to teach. These two principles were as clearly laid down, as well understood, and as universally admitted in the Middle Ages, when there was never a week without war, as they are at the present moment, when war is deemed a rare and singular occurrence. Since, then, the actions of men respecting war have been gradually changing, while their moral knowledge respecting it has not been changing, it is palpably evident that the changeable effect has not been produced by the unchangeable

¹ On the diminished love of war, which is even more marked than the actual diminution of war, see some interesting remarks in Comte, *Philosophie Positive*, Vol. IV, pp. 488, 713; Vol. VI, pp. 68, 424–436, where the antagonism between the military spirit and the industrial spirit is, on the whole, well worked out, though some of the leading phenomena have escaped the attention of this eminent philosopher, from his want of acquaintance with the history and present state of political economy.

² In Pellew's *Life of Sidmouth*, 1847, Vol. III, p. 137, this prolonged peace is gravely ascribed to "the wisdom of the adjustment of 1815"; in other words, to the proceedings of the Congress of Vienna!

cause. It is impossible to conceive an argument more decisive than this. If it can be proved that during the last thousand years moralists or theologians have pointed out a single evil caused by war, the existence of which was unknown to their predecessors, — if this can be proved, I will abandon the view for which I am contending. But if, as I most confidently assert, this cannot be proved, then it must be conceded that no additions having been made on this subject to the stock of morals, no additions can have been made to the result which the morals produce.¹

Thus far as to the influence exercised by moral feelings in increasing our distaste for war. But if, on the other hand, we turn to the human intellect, in the narrowest sense of the term, we shall find that every great increase in its activity has been a heavy blow to the warlike spirit. The full evidence for this I shall hereafter detail at considerable length; and in this introduction I can only pretend to bring forward a few of those prominent points which, being on the surface of history, will be at once understood.

Of these points one of the most obvious is, that every important addition made to knowledge increases the authority of the intellectual classes by increasing the resources which they have

¹ Unless more zeal has been displayed in the diffusion of moral and religious principles; in which case it would be possible for the principles to be stationary, and yet their effects be progressive. But so far from this, it is certain that in the Middle Ages there were, relatively to the population, more churches than there are now; the spiritual classes were far more numerous, the proselyting spirit far more eager, and there was a much stronger determination to prevent purely scientific inferences from encroaching on ethical ones. Indeed, during the Middle Ages the moral and religious literature outweighed all the profane literature put together, and surpassed it not only in bulk but also in the ability of its cultivators. Now, however, the generalizations of moralists have ceased to control the affairs of men and have made way for the larger doctrine of expediency, which includes all interests and all classes. Systematic writers on morals reached their zenith in the thirteenth century, fell off rapidly after that period, were, as Coleridge well says, opposed by "the genius of Protestantism"; and by the end of the seventeenth century became extinct in the most civilized countries, the *Ductor Dubitantium* of Jeremy Taylor being the last comprehensive attempt of a man of genius to mold society solely according to the maxims of moralists. Compare two interesting passages in Mosheim's *Ecclesiastical History*, Vol. I, p. 338, and Coleridge's *Friend*, Vol. III, p. 104.

to wield. Now the antagonism between these classes and the military class is evident: it is the antagonism between thought and action, between the internal and the external, between argument and violence, between persuasion and force; or, to sum up the whole, between men who live by the pursuits of peace and those who live by the practice of war. Whatever, therefore, is favorable to one class is manifestly unfavorable to the other. Supposing the remaining circumstances to be the same, it must happen that as the intellectual acquisitions of a people increase, their love of war will diminish; and if their intellectual acquisitions are very small, their love of war will be very great.¹ In perfectly barbarous countries there are no intellectual acquisitions; and the mind being a blank and dreary waste, the only resource is external activity,² the only merit personal courage. No account is made of any man unless he has killed an enemy; and the more he has killed, the greater the reputation he enjoys.³

¹ Herder boldly asserts that man, originally and by virtue of his organization, is peaceably disposed; but this opinion is decisively refuted by the immense additions which, since the time of Herder, have been made to our knowledge of the feelings and habits of savages. "Indessen ist's wahr, dass der Bau des Menschen vorzüglich auf die Vertheidigung, nicht auf den Angriff gerichtet ist: in diesem muss ihm die Kunst zu Hülfe kommen, in jener aber ist er von Natur das kräftigste Geschöpf der Erde. Seine Gestalt selbst lehret ihn also Friedlichkeit, nicht räuberische Mordverwüstung, — der Humanität erstes Merkmal" (*Ideen zur Geschichte*, Vol. I, p. 185).

² Hence, no doubt, that acuteness of the senses, natural and indeed necessary to an early state of society, and which, being at the expense of the reflecting faculties, assimilates man to the lower animals. See Carpenter's *Human Physiology*, p. 404; and a fine passage in Herder, *Ideen zur Geschichte*, Vol. II, p. 12: "Das abstehende thierische Ohr, das gleichsam immer lauscht und horchet, das kleine scharfe Auge, das in der weitesten Ferne den kleinsten Rauch oder Staub gewahr wird, der weisse hervorbleckende, knochenbenagende Zahn, der dicke Hals und die zurückgebogene Stellung ihres Kopfes auf demselben." Compare Prichard's *Physical History of Mankind*, Vol. I, pp. 292, 293; Azara, *Amérique Méridionale*, Vol. II, p. 18; Wrangel's *Polar Expedition*, p. 384; Pallme's *Travels in Kordofan*, pp. 132, 133.

³ "Among some Macedonian tribes the man who had never slain an enemy was marked by a degrading badge" (Grote's *History of Greece*, Vol. XI, p. 397). Among the Dyaks of Borneo, "a man cannot marry until he has procured a human head; and he that has several may be distinguished by his proud and lofty bearing, for it constitutes his patent of nobility" (Earl's "Account of Borneo," in *Journal of Asiatic Society*, Vol. IV, p. 181). See also Crawford on Borneo, in *Journal of Geographical Society*, Vol. XXIII, pp. 77, 80. And for similar

This is the purely savage state ; and it is the state in which military glory is most esteemed, and military men most respected.¹ From this frightful debasement, even up to the summit of civilization, there is a long series of consecutive steps, — gradations, at each of which something is taken from the dominion of force, and something given to the authority of thought. Slowly, and one by one, the intellectual and pacific classes begin to arise, at first held in great contempt by warriors, but nevertheless gradually gaining ground, increasing in number and in power, and at each increase weakening that old military spirit in which all other tendencies had formerly been absorbed. Trade, commerce, manufactures, law, diplomacy, literature, science, philosophy, — all these things, originally unknown, become organized into separate studies, each study having a separate class, and each class insisting on the importance of its own pursuit. Of these classes some are, no doubt, less pacific than others ; but even those which are the least pacific are of course more so than men whose associations are entirely military, and who see in every fresh war that chance of personal distinction from which during peace they are altogether debarred.²

instances of this absorption of all other ideas into warlike ones, compare *Journal of Geographical Society*, Vol. X, p. 357 ; Mallet's *Northern Antiquities*, pp. 158, 159, 195 ; Thirlwall's *History of Greece*, Vol. I, pp. 226, 284 ; Vol. VIII, p. 209 ; Henderson's *History of Brazil*, p. 475 ; Southey's *History of Brazil*, Vol. I, pp. 126, 248 ; Asiatic Researches, Vol. II, p. 188 ; Vol. VII, p. 193 ; *Transactions of Bombay Society*, Vol. II, pp. 51, 52 ; Hoskins' *Travels in Ethiopia*, p. 163 ; Origines du Droit, in *Œuvres de Michelet*, Vol. II, pp. 333, 334, note. See also the Thracians : γῆς δὲ ἐργάτην ἀτιμώτατον. τὸ ζῆν ἀπὸ πολέμου καὶ ληϊστῆος, κάλλιστον (Herodotus, Book V, chap. vi ; Vol. III, p. 10, edit. Baehr).

¹ Malcolm (*History of Persia*, Vol. I, p. 204) says of the Tartars, "There is only one path to eminence, that of military renown." Thus, too, in the *Institutes of Timur*, p. 269 : "He only is equal to stations of power and dignity who is well acquainted with the military art, and with the various modes of breaking and defeating hostile armies." The same turn of mind is shown in the frequency and evident delight with which Homer relates battles, — a peculiarity noticed in Mure's *Greek Literature*, Vol. II, pp. 63, 64, where an attempt is made to turn it into an argument to prove that the Homeric poems are all by the same author, though the more legitimate inference would be that the poems were all composed in a barbarous age.

² To the prospect of personal distinction there was formerly added that of wealth ; and in Europe, during the Middle Ages, war was a very lucrative profession, owing to the custom of exacting heavy ransom for the liberty of

Thus it is that as civilization advances an equipoise is established, and military ardor is balanced by motives which none but a cultivated people can feel. But among a people whose intellect is not cultivated, such a balance can never exist. Of this we see a good illustration in the history of the present war.¹ For the peculiarity of the great contest in which we are engaged is that it was produced not by the conflicting interests of civilized countries but by a rupture between Russia and Turkey, the two most barbarous monarchies now remaining in Europe. This is a very significant fact. It is highly characteristic of the actual condition of society that a peace of unexampled length should have been broken not, as former peaces were broken, by a quarrel between two civilized nations, but by the encroachments of the uncivilized Russians on the still more uncivilized Turks. At an earlier period the influence of intellectual, and therefore pacific, habits was indeed constantly increasing, but was still too weak, even in the most advanced countries, to control the old warlike habits; hence there arose a desire for conquest, which often outweighed all other feelings, and induced great nations like France and England to attack each other on the slightest pretense, and seek every opportunity of gratifying the vindictive hatred with which each contemplated the prosperity of its neighbor. Such, however, is now the progress of affairs that these two nations, laying aside the peevish and irritable jealousy they once entertained, are united in a common cause, and have drawn the sword not for selfish purposes but to protect the civilized world against the incursions of a barbarous foe.

prisoners. See Barrington's learned work, *Observations on the Statutes*, pp. 390-393. In the reign of Richard II "a war with France was esteemed as almost the only method by which an English gentleman could become rich." Compare Turner's *History of England*, Vol. VI, p. 21. Sainte-Palaye (*Mémoires sur l'Ancienne Chevalerie*, Vol. I, p. 311) says: "La guerre enrichissoit alors par le butin, et par les rançons, celui qui la faisoit avec le plus de valeur, de vigilance et d'activité. La rançon étoit, ce semble, pour l'ordinaire, une année des revenus du prisonnier." For an analogy with this, see *Rig Veda Sanhita*, Vol. I, p. 208, sec. 3; Vol. II, p. 265, sec. 13. In Europe the custom of paying a ransom for prisoners of war survived the Middle Ages, and was only put an end to by the peace of Munster, in 1648. See Manning's *Commentaries on the Law of Nations*, 1839, p. 162; and on the profits formerly made, *ibid.*, pp. 157, 158.

¹ I wrote this in 1855.

This is the leading feature which distinguishes the present war from its predecessors. That a peace should last for nearly forty years, and should then be interrupted not, as heretofore, by hostilities between civilized states but by the ambition of the only empire which is at once powerful and uncivilized, — is one of many proofs that a dislike to war is a cultivated taste peculiar to an intellectual people. For no one will pretend that the military predilections of Russia are caused by a low state of morals, or by a disregard of religious duties. So far from this, all the evidence we have shows that vicious habits are not more common in Russia than in France or England,¹ and it is certain that the Russians submit to the teachings of the church with a docility greater than that displayed by their civilized opponents.² It is, therefore, clear that Russia is a warlike country not because the inhabitants are immoral but because they are unintellectual. The fault is in the head, not in the heart. In Russia the national intellect being little cultivated, the intellectual classes lack influence; the military class, therefore, is supreme. In this early stage of society there is as yet no middle rank,³ and consequently the thoughtful and pacific habits which spring from the middle ranks have no existence. The minds of men, deprived of mental pursuits,⁴ naturally turn to warlike ones as the only

¹ Indeed, some have supposed that there is less immorality in Russia than in Western Europe; but this idea is probably erroneous. See Stirling's *Russia*, pp. 59, 60, London, 1841. The benevolence and charitable disposition of the Russians are attested by Pinkerton, who had good means of information, and was by no means prejudiced in their favor. See Pinkerton's *Russia*, pp. 335, 336, London, 1833. Sir John Sinclair also says they are "prone to acts of kindness and charity" (*Sinclair's Correspondence*, Vol. II, p. 241).

² The reverence of the Russian people for their clergy has attracted the attention of many observers, and is, indeed, too notorious to require proof.

³ A very observing and intelligent writer says, "Russia has only two ranks, — the highest and the lowest" (*Letters from the Baltic*, Vol. II, p. 185, London, 1841). "*Les marchands, qui formeraient une classe moyenne, sont en si petit nombre qu'ils ne peuvent marquer dans l'état: d'ailleurs presque tous sont étrangers; . . . où donc trouver cette classe moyenne qui fait la force des états?*" (*Custine, Russie*, Vol. II, pp. 125, 126; see also Vol. IV, p. 74).

⁴ A recent authoress, who had admirable opportunities of studying the society of St. Petersburg, which she estimated with that fine tact peculiar to an accomplished woman, was amazed at this state of things among classes surrounded with every form of luxury and wealth: "a total absence of all rational tastes or literary

resource remaining to them. Hence it is that in Russia all ability is estimated by a military standard. The army is considered to be the greatest glory of the country; to win a battle, or outwit an enemy, is valued as one of the noblest achievements of life; and civilians, whatever their merits may be, are despised by this barbarous people as beings of an altogether inferior and subordinate character.¹

In England, on the other hand, opposite causes have produced opposite results. With us intellectual progress is so rapid and the authority of the middle class so great that not only have military men no influence in the government of the state but there seemed at one time even a danger lest we should push this feeling to an extreme; and lest, from our detestation of war, we should neglect those defensive precautions which the enmity of other nations makes it advisable to adopt. But this at least we may safely say, that in our country a love of war is, as a national

topics. . . . Here it is absolutely *mauvais genre* to discuss a rational subject, — mere *pléanterie* to be caught upon any topics beyond dressing, dancing, and a *jolie tournure*" (Letters from the Baltic, 1841, Vol. II, p. 233). M. Custine (La Russie en 1839, Vol. I, p. 321) says, "Règle générale, personne ne profère jamais un mot qui pourrait intéresser vivement quelqu'un." In Vol. II, p. 195, "De toutes les facultés de l'intelligence, la seule qu'on estime ici c'est le tact." Another writer of repute, M. Kohl, contemptuously observes, that in Russia "the depths of science are not even guessed at" (Kohl's Russia, p. 142, London, 1842).

¹ According to Schnitzler, "Precedence is determined in Russia by military rank; and an ensign would take the *pas* of a nobleman not enrolled in the army or occupying some situation giving military rank" (M'Culloch's Geographical Dictionary, 1849, Vol. II, p. 614). The same thing is stated in Pinkerton's Russia, 1833, p. 321. M. Erman, who traveled through a great part of the Russian Empire, says, "In the modern language of St. Petersburg one constantly hears a distinction of the greatest importance conveyed in the inquiry which is habitually made respecting individuals of the educated class: Is he a plain-coat or a uniform?" (Erman's Siberia, Vol. I, p. 45). See also on this preponderance of the military classes, which is the inevitable fruit of the national ignorance, Kohl's Russia, pp. 28, 194; Stirling's Russia under Nicholas the First, p. 7; Custine, Russie, Vol. I, pp. 147, 152, 252, 266; Vol. II, pp. 71, 128, 309; Vol. III, p. 328; Vol. IV, p. 284. Sir A. Alison (History of Europe, Vol. II, pp. 391, 392) says: "The whole energies of the nation are turned towards the army. Commerce, the law, and all civil employments are held in no esteem; the whole youth of any consideration betake themselves to the profession of arms." The same writer (Vol. X, p. 566) quotes the remark of Bremner, that "nothing astonishes the Russian or Polish nobleman so much as seeing the estimation in which the civil professions, and especially the bar, are held in Great Britain."

taste, utterly extinct. And this vast result has been effected not by moral teachings, nor by the dictates of moral instinct, but by the simple fact that in the progress of civilization there have been formed certain classes of society which have an interest in the preservation of peace, and whose united authority is sufficient to control those other classes whose interest lies in the prosecution of war.

It would be easy to conduct this argument further, and to prove how, by an increasing love of intellectual pursuits, the military service necessarily declines not only in reputation but likewise in ability. In a backward state of society men of distinguished talents crowd to the army, and are proud to enroll themselves in its ranks. But as society advances, new sources of activity are opened, and new professions arise, which, being essentially mental, offer to genius opportunities for success more rapid than any formerly known. The consequence is that in England, where these opportunities are more numerous than elsewhere, it nearly always happens that if a father has a son whose faculties are remarkable, he brings him up to one of the lay professions, where intellect, when accompanied by industry, is sure to be rewarded. If, however, the inferiority of the boy is obvious, a suitable remedy is at hand : he is made either a soldier or a clergyman ; he is sent into the army, or hidden in the church. And this, as we shall hereafter see, is one of the reasons why, as society advances, the ecclesiastical spirit and the military spirit never fail to decline. As soon as eminent men grow unwilling to enter any profession, the luster of that profession will be tarnished : first its reputation will be lessened, and then its power will be abridged. This is the process through which Europe is actually passing, in regard both to the church and to the army. The evidence, so far as the ecclesiastical profession is concerned, will be found in another part of this work. The evidence respecting the military profession is equally decisive. For although that profession has in modern Europe produced a few men of undoubted genius, their number is so extremely small as to amaze us at the dearth of original ability. That the military class, taken as a whole, has a tendency to degenerate will become still more

obvious if we compare long periods of time. In the ancient world the leading warriors were not only possessed of considerable accomplishments but were comprehensive thinkers in politics as well as in war, and were in every respect the first characters of their age. Thus—to give only a few specimens from a single people—we find that the three most successful statesmen Greece ever produced were Solon, Themistocles, and Epaminondas,—all of whom were distinguished military commanders. Socrates, supposed by some to be the wisest of the ancients, was a soldier; and so was Plato; and so was Antisthenes, the celebrated founder of the Cynics. Archytas, who gave a new direction to the Pythagorean philosophy, and Melissus, who developed the Eleatic philosophy, were both of them well-known generals, famous alike in literature and in war. Among the most eminent orators, Pericles, Alcibiades, Andocides, Demosthenes, and Æschines were all members of the military profession, as also were the two greatest tragic writers, Æschylus and Sophocles. Archilochus, who is said to have invented iambic verses, and whom Horace took as a model, was a soldier; and the same profession could likewise boast of Tyrtæus, one of the founders of elegiac poetry, and of Alcæus, one of the best composers of lyric poetry. The most philosophic of all the Greek historians was certainly Thucydides; but he, as well as Xenophon and Polybius, held high military appointments, and on more than one occasion succeeded in changing the fortunes of war. In the midst of the hurry and turmoil of camps these eminent men cultivated their minds to the highest point that the knowledge of that age would allow; and so wide is the range of their thoughts, and such the beauty and dignity of their style, that their works are read by thousands who care nothing about the sieges and battles in which they were engaged.

These were among the ornaments of the military profession in the ancient world; and all of them wrote in the same language, and were read by the same people. But in the modern world this identical profession, including many millions of men, and covering the whole of Europe, has never been able, since the sixteenth century, to produce ten authors who have reached the

first class either as writers or as thinkers. Descartes is an instance of an European soldier combining the two qualities, he being as remarkable for the exquisite beauty of his style as for the depth and originality of his inquiries. This, however, is a solitary case ; and there is, I believe, no second one of a modern military writer thus excelling in both departments. Certainly the English army, during the last two hundred and fifty years, affords no example of it, and has, in fact, possessed only two authors, Raleigh and Napier, whose works are recognized as models, and are studied merely for their intrinsic merit. Still, this is simply in reference to style ; and these two historians, notwithstanding their skill in composition, have never been reputed profound thinkers on difficult subjects, nor have they added anything of moment to the stock of our knowledge. In the same way, among the ancients, the most eminent soldiers were likewise the most eminent politicians, and the best leaders of the army were generally the best governors of the state. But here again the progress of society has wrought so great a change that for a long period instances of this have been excessively rare. Even Gustavus Adolphus and Frederick the Great failed ignominiously in their domestic policy, and showed themselves as short-sighted in the arts of peace as they were sagacious in the arts of war. Cromwell, Washington, and Napoleon are, perhaps, the only first-rate modern warriors of whom it can be fairly said that they were equally competent to govern a kingdom and command an army. And if we look at England as furnishing a familiar illustration, we see this remark exemplified in our two greatest generals, — Marlborough and Wellington. Marlborough was a man not only of the most idle and frivolous pursuits but was so miserably ignorant that his deficiencies made him the ridicule of his contemporaries ; and of politics he had no other idea but to gain the favor of the sovereign by flattering his mistress, to desert the brother of that sovereign at his utmost need, and afterwards, by a double treachery, turn against his next benefactor, and engage in a criminal as well as a foolish correspondence with the very man whom a few years before he had infamously abandoned. These were the characteristics of

the greatest conqueror of his age, the hero of a hundred fights, the victor of Blenheim and of Ramillies. As to our other great warrior, it is indeed true that the name of Wellington should never be pronounced by an Englishman without gratitude and respect: these feelings are, however, due solely to his vast military services, the importance of which it would ill become us to forget. But whoever has studied the civil history of England during the present century knows full well that this military chief, who in the field shone without a rival, and who, to his still greater glory be it said, possessed an integrity of purpose, an unflinching honesty, and a high moral feeling, which could not be surpassed, was nevertheless utterly unequal to the complicated exigencies of political life. It is notorious that in his views of the most important legislative measures he was always in the wrong. It is notorious, and the evidence of it stands recorded in our Parliamentary Debates, that every great measure which was carried, every great improvement, every great step in reform, every concession to the popular wishes, was strenuously opposed by the Duke of Wellington, became law in spite of his opposition and after his mournful declarations that by such means the security of England would be seriously imperiled. Yet there is now hardly a forward schoolboy who does not know that to these very measures the present stability of our country is mainly owing. Experience, the great test of wisdom, has amply proved that those vast schemes of reform, which the Duke of Wellington spent his political life in opposing, were, I will not say expedient or advisable, but indispensably necessary. That policy of resisting the popular will which he constantly advised is precisely the policy which has been pursued, since the Congress of Vienna, in every monarchy except our own. The result of that policy is written for our instruction; it is written in that great explosion of popular passion, which in the moment of its wrath upset the proudest thrones, destroyed princely families, ruined noble houses, desolated beautiful cities. And if the counsel of our great general had been followed, if the just demands of the people had been refused,—this same lesson would have been written in the annals of our own land, and we should most assuredly have been unable

to escape the consequence of that terrible catastrophe in which the ignorance and selfishness of rulers did, only a few years ago, involve a large part of the civilized world.

Thus striking is the contrast between the military genius of ancient times and the military genius of modern Europe. The causes of this decay are clearly traceable to the circumstance, that owing to the immense increase of intellectual employments, few men of ability will now enter a profession into which in antiquity men of ability eagerly crowded, as supplying the best means of exercising those faculties which in more civilized countries are turned to a better account. This, indeed, is a very important change; and thus to transfer the most powerful intellects from the arts of war to the arts of peace has been the slow work of many centuries, the gradual but constant encroachments of advancing knowledge. To write the history of those encroachments would be to write the history of the human intellect, — a task impossible for any single man adequately to perform. But the subject is one of such interest, and has been so little studied, that though I have already carried this analysis further than I had intended, I cannot refrain from noticing what appear to me to be the three leading ways in which the warlike spirit of the ancient world has been weakened by the progress of European knowledge.

The first of these arose out of the invention of gunpowder, which, though a warlike contrivance, has in its results been eminently serviceable to the interests of peace.¹ This important invention is said to have been made in the thirteenth century,² but was not in common use until the fourteenth, or even the

¹ The consequences of the invention of gunpowder are considered very superficially by Frederick Schlegel (*Lectures on the History of Literature*, Vol. II, pp. 37, 38), and by Dugald Stewart (*Philosophy of the Mind*, Vol. I, p. 262). They are examined with much greater ability, though by no means exhaustively, in Smith's *Wealth of Nations*, Book V, chap. i, pp. 292, 296, 297; Herder, *Ideen zur Geschichte der Menschheit*, Vol. IV, p. 301; Hallam's *Middle Ages*, Vol. II, p. 470.

² From the following authorities it appears impossible to trace it further back than the thirteenth century, and it is doubtful whether the Arabs were, as is commonly supposed, the inventors: Humboldt's *Cosmos*, Vol. II, p. 590; Koch, *Tableau des Révolutions*, Vol. I, p. 242; Beckmann's *History of Inventions*, 1846, Vol. II, p. 505; *Histoire Lit. de la France*, Vol. XX, p. 236; Thomson's *History of Chemistry*, Vol. I, p. 36; Hallam's *Middle Ages*, Vol. I, p. 341. The

beginning of the fifteenth century. Scarcely had it come into operation, when it worked a great change in the whole scheme and practice of war. Before this time it was considered the duty of nearly every citizen to be prepared to enter the military service for the purpose either of defending his own country or of attacking others.¹ Standing armies were entirely unknown, and in their place there existed a rude and barbarous militia, always ready for battle, and always unwilling to engage in those peaceful pursuits which were then universally despised. Nearly every man being a soldier, the military profession, as such, had no separate existence; or, to speak more properly, the whole of Europe composed one great army, in which all other professions were merged. To this the only exception was the ecclesiastical profession; but even that was affected by the general tendency, and it was not at all uncommon to see large bodies of troops led to the field by bishops and abbots, to most of whom the arts of war were in those days perfectly familiar.² At all events, between these two professions men were necessarily divided; the only avocations were war and theology; and if you refused to enter the church, you were bound to serve in the army. As a natural consequence, everything of real importance was altogether neglected. There were, indeed, many priests and many warriors,

statements in Erman's *Siberia*, Vol. I, pp. 370, 371, are more positive than the evidence we are possessed of will justify; but there can be no doubt that a sort of gunpowder was at an early period used in China, and in other parts of Asia.

¹ Vattel, *Le Droit des Gens*, Vol. II, p. 129; Lingard's *History of England*, Vol. II, pp. 356, 357. Among the Anglo-Saxons, "all free men and proprietors of land, except the ministers of religion, were trained to the use of arms, and always held ready to take the field at a moment's warning" (Eccleston's *English Antiquities*, p. 62). "There was no distinction between the soldier and the citizen" (Palgrave's *Anglo-Saxon Commonwealth*, Vol. I, p. 200).

² On these warlike ecclesiastics, compare Grose's *Military Antiquities*, Vol. I, pp. 67-68; Lingard's *History of England*, Vol. II, pp. 26, 183; Vol. III, p. 14; Turner's *History of England*, Vol. IV, p. 458; Vol. V, pp. 92, 402, 406; Mosheim's *Ecclesiastical History*, Vol. I, pp. 173, 193, 241; Crichton's *Scandinavia*, Vol. I, p. 220, Edinburgh, 1838. Such opponents were the more formidable because in those happy days it was sacrilege for a layman to lay hands on a bishop. In 1095 his Holiness the Pope caused a council to declare, "Quod qui apprehenderit episcopum omnino exlex fiat" (Matthaei *Paris Historiae Major*, p. 18). As the context contains no limitation of this, it would follow that a man became spiritually outlawed if he, even in self-defense, took a bishop prisoner.

many sermons and many battles.¹ But, on the other hand, there was neither trade, nor commerce, nor manufactures; there was no science, no literature: the useful arts were entirely unknown; and even the highest ranks of society were unacquainted not only with the most ordinary comforts but with the commonest decencies of civilized life.

But so soon as gunpowder came into use, there was laid the foundation of a great change. According to the old system, a man had only to possess what he generally inherited from his father, either a sword or a bow, and he was ready equipped for the field.² According to the new system, new means were required, and the equipment became more costly and more difficult. First, there was the supply of gunpowder,³ then there was the possession of muskets, which were expensive weapons and considered

¹ As Sharon Turner observes of England under the Anglo-Saxon government, "War and religion were the absorbing subjects of this period" (Turner's *History of England*, Vol. III, p. 263). And a recent scientific historian says of Europe generally: "alle Künste und Kenntnisse, die sich nicht auf das edle Kriegs-, Rauf- und Raubhandwerk bezogen, waren überflüssig und schädlich. Nur etwas Theologie war vonnöthen, um die Erde mit dem Himmel zu verbinden" (Winckler, *Geschichte der Botanik*, 1854, p. 56).

² In 1181 Henry II of England ordered that every man should have either a sword or a bow, which he was not to sell but leave to his heir: "caeteri autem omnes haberent wanbasiam, capellum ferreum, lanceam et gladium, vel arcum et sagittas: et prohibuit ne aliquis arma sua venderet vel invadiaret; sed cum moreretur, daret illa propinquiore haeredi suo" (Rog. de Hov. *Annal. in Scriptores post Bedam*, p. 348 rev.). In the reign of Edward I it was ordered that every man possessing land to the value of forty shillings should keep "a sword, bow and arrows, and a dagger. . . . Those who were to keep bows and arrows might have them out of the forest" (Grose's *Military Antiquities*, Vol. II, pp. 301, 302). Compare Geijer's *History of the Swedes*, Part I, p. 94. Even late in the fifteenth century there were at the universities of Oxford and Cambridge "in each from four to five thousand scholars, all grown up, carrying swords and bows, and in great part gentry" (Sir William Hamilton on the history of universities, in *Hamilton's Philosophical Discussions*, p. 414). One of the latest attempts made to revive archery was a warrant issued by Elizabeth in 1596, and printed by Mr. Collier in the *Egerton Papers*, pp. 217-220, edit. Camden Society, 1840. In the southwest of England bows and arrows did not finally disappear from the muster rolls till 1599, and in the meantime the musket gained ground. See Yonge's *Diary*, edit. Camden Society, 1848, p. xvii.

³ It is stated by many writers that no gunpowder was manufactured in England until the reign of Elizabeth. See Camden's *Annals of the Reign of Elizabeth*, and Kennett's *History*, Vol. II, p. 388, London, 1719; Strickland's *Queens of England*, Vol. VI, p. 223, London, 1843; Grose's *Military Antiquities*, Vol. I, p. 378. But Sharon

difficult to manage.¹ Then, too, there were other contrivances to which gunpowder naturally gave rise, such as pistols, bombs, mortars, shells, mines, and the like.² All these things, by increasing the complication of the military art, increased the necessity of discipline and practice; while, at the same time, the change that was being effected in the ordinary weapons deprived the great majority of men of the possibility of procuring them. To suit these altered circumstances a new system was organized; and it was found advisable to train up bodies of men for the sole purpose of war, and to separate them as much as possible from those other employments in which formerly all soldiers were

Turner (*History of England*, Vol. VI, pp. 490, 491, London, 1839) has shown, from an order of Richard III in the Harleian manuscripts, that it was made in England in 1483; and Mr. Eccleston (*English Antiquities*, p. 182, London, 1847) states that the English both made and exported it as early as 1411: compare p. 202. At all events, it long remained a costly article; and even in the reign of Charles I, I find a complaint of its dearness, "whereby the train-bands are much discouraged in their exercising" (*Parliamentary History*, Vol. II, p. 655). In 1686 it appears from the Clarendon Correspondence (Vol. I, p. 413) that the wholesale price ranged from about £2 10s. to £3 a barrel. On the expense of making it in the present century, see Liebig and Kopp's *Reports on Chemistry*, Vol. III, p. 325, London, 1852.

¹ The muskets were such miserable machines that in the middle of the fifteenth century it took a quarter of an hour to charge and fire one (Hallam's *Middle Ages*, Vol. I, p. 342). Grose (*Military Antiquities*, Vol. I, p. 146; Vol. II, pp. 292, 337) says, that the first mention of muskets in England is in 1471; and that rests for them did not become obsolete until the reign of Charles I. In the recent edition of Beckmann's *History of Inventions*, Vol. II, p. 535, London, 1846, it is strangely supposed that muskets were "first used at the battle of Pavia." Compare Daniel, *Histoire de la Milice Française*, Vol. I, p. 464, with Smythe's *Military Discourses*, in Ellis' *Original Letters*, p. 53, edit. Camden Society.

² Pistols are said to have been invented early in the sixteenth century (Grose's *Military Antiquities*, Vol. I, pp. 102, 146). Gunpowder was first employed in mining towns in 1487. See Prescott's *History of Ferdinand and Isabella*, Vol. II, p. 32; Koch, *Tableau des Révolutions*, Vol. I, p. 243; Daniel, *Histoire de la Milice Française*, Vol. I, p. 574. Daniel (*Milice Française*, Vol. I, pp. 580, 581) says that bombs were not invented till 1588; and the same thing is asserted in *Biographie Universelle*, Vol. XV, p. 248; but, according to Grose (*Military Antiquities*, Vol. I, p. 387), they are mentioned by Valturinus in 1472. On the general condition of the French artillery in the sixteenth century, see *Relations des Ambassadeurs Vénitiens*, 4to, Vol. I, pp. 94, 476, 478, Paris, 1838: a curious and valuable publication. There is some doubt as to the exact period in which cannons were first known, but they were certainly used in war before the middle of the fourteenth century. See Bohlen, *Das alte Indien*, Vol. II, p. 63, and Daniel, *Histoire de la Milice Française*, Vol. I, pp. 441, 442.

occasionally engaged. Thus it was that there arose standing armies; the first of which were formed in the middle of the fifteenth century¹ almost immediately after gunpowder was generally known. Thus, too, there arose the custom of employing mercenary troops, of which we find a few earlier instances, though the practice was not fully established until the latter part of the fourteenth century.²

The importance of this movement was soon seen by the change it effected in the classification of European society. The regular troops being, from their discipline, more serviceable against the enemy, and also more immediately under the control of the government, it naturally followed that as their merits became understood, the old militia should fall first into disrepute, then be neglected, and then sensibly diminish. At the same time, this diminution in the number of undisciplined soldiers deprived the country of a part of its warlike resources, and therefore made it necessary to pay more attention to the disciplined ones, and to confine them more exclusively to their military duties. Thus it was that a division was first broadly established between the soldier and the civilian, and there arose a separate military profession,³ which, consisting of a comparatively small number of the total amount of citizens, left the remainder to settle in some other pursuit.⁴ In this way immense bodies of men were gradually weaned from their old warlike habits; and being, as it were,

¹ Blackstone's Commentaries, Vol. I, p. 413; Daniel, *Histoire de la Milice Française*, Vol. I, p. 210; Vol. II, pp. 491, 493; *Œuvres de Turgot*, Vol. VIII, p. 228.

² The leading facts respecting the employment of mercenary troops are indicated with great judgment by Mr. Hallam in his *Middle Ages*, Vol. I, pp. 328-337.

³ Grose (*Military Antiquities*, Vol. I, pp. 310, 311) says, that until the sixteenth century English soldiers had no professional dress, but "were distinguished by badges of their leaders' arms, similar to those now worn by watermen." It was also early in the sixteenth century that there first arose a separate military literature. Daniel (*Histoire de la Milice Française*, Vol. I, p. 380) says: "Les auteurs qui ont écrit en détail sur la discipline militaire: or ce n'est guères que sous François I, et sous l'Empereur Charles V, que les Italiens, les François, les Espagnols et les Allemands ont commencé à écrire sur ce sujet."

⁴ The change from the time when every layman was a soldier is very remarkable. Adam Smith (*Wealth of Nations*, Book V, chap. 1, p. 291) says, "Among the civilized nations of modern Europe it is commonly computed that not more than the one-hundredth part of the inhabitants of any country can be employed

forced into civil life, their energies became available for the general purposes of society, and for the cultivation of those arts of peace which had formerly been neglected. The result was, that the European mind, instead of being, as heretofore, solely occupied either with war or with theology, now struck out into a middle path, and created those great branches of knowledge to which modern civilization owes its origin. In each successive generation this tendency towards a separate organization was more marked; the utility of a division of labor became clearly recognized; and as by this means knowledge itself advanced, the authority of this middle or intellectual class correspondingly increased. Each addition to its power lessened the weight of the other two classes, and checked those superstitious feelings and that love of war on which, in an early state of society, all enthusiasm is concentrated. The evidence of the growth and diffusion of this intellectual principle is so full and decisive that it would be possible, by combining all the branches of knowledge, to trace nearly the whole of its consecutive steps. At present it is enough to say that, taking a general view, this third or intellectual class first displayed an independent, though still a vague, activity in the fourteenth and fifteenth centuries; that in the sixteenth century this activity, assuming a distinct form, showed itself in religious outbreaks; that in the seventeenth century its energy, becoming more practical, was turned against the abuses of government, and caused a series of rebellions from which hardly any part of Europe escaped; and finally, that in the eighteenth and nineteenth centuries it has extended its aim to every department of public and private life, diffusing education, teaching legislators, controlling kings, and, above all, settling on a sure foundation that supremacy of public opinion to which not only constitutional princes but even the most despotic sovereigns are now rendered strictly amenable.

as soldiers without ruin to the country which pays the expense of their service." The same proportion is given in Sadler's *Law of Population*, Vol. I, p. 292, and in *Grandeur et Décadence des Romains*, chap. iii, — *Œuvres de Montesquieu*, p. 130; also in Sharpe's *History of Egypt*, Vol. I, p. 105; and in Alison's *History of Europe*, Vol. XII, p. 318.

These, indeed, are vast questions, and without some knowledge of them no one can understand the present condition of European society, or form the least idea of its future prospects. It is, however, sufficient that the reader can now perceive the way in which so slight a matter as the invention of gunpowder diminished the warlike spirit, by diminishing the number of persons to whom the practice of war was habitual. There were, no doubt, other and collateral circumstances which tended in the same direction; but the use of gunpowder was the most effectual because, by increasing the difficulty and expense of war, it made a separate military profession indispensable; and thus, curtailing the action of the military spirit, left an overplus, an unemployed energy, which soon found its way to the pursuits of peace, infused into them a new life, and began to control that lust of conquest which, though natural to a barbarous people, is the great enemy of knowledge, and is the most fatal of those diseased appetites by which even civilized countries are too often afflicted.

The second intellectual movement by which the love of war has been lessened is much more recent, and has not yet produced the whole of its natural effects. I allude to the discoveries made by political economy, — a branch of knowledge with which even the wisest of the ancients had not the least acquaintance, but which possesses an importance it would be difficult to exaggerate, and is, moreover, remarkable as being the only subject immediately connected with the art of government that has yet been raised to a science. The practical value of this noble study, though perhaps only fully known to the more advanced thinkers, is gradually becoming recognized by men of ordinary education; but even those by whom it is understood seem to have paid little attention to the way in which, by its influence, the interests of peace, and therefore of civilization, have been directly promoted.¹ The manner in which this has been brought about I will endeavor to explain, as it will furnish another argument in support of that great principle which I wish to establish.

¹ The pacific tendencies of political economy are touched on very briefly in Blanqui, *Histoire de l'Économie Politique*, Vol. II, p. 207, and in Twiss' *Progress of Political Economy*, p. 240.

It is well known that among the different causes of war commercial jealousy was formerly one of the most conspicuous; and there are numerous instances of quarrels respecting the promulgation of some particular tariff, or the protection of some favorite manufacture. Disputes of this kind were founded upon the very ignorant but the very natural notion that the advantages of commerce depend upon the balance of trade, and that whatever is gained by one country must be lost by another. It was believed that wealth is composed entirely of money, and that it is therefore the essential interest of every people to import few commodities and much gold. Whenever this was done, affairs were said to be in a sound and healthy state; but if this was not done, it was declared that we were being drained of our resources, and that some other country was getting the better of us, and was enriching itself at our expense.¹ For this the only remedy was, to negotiate a commercial treaty which should oblige the offending nation to take more of our commodities, and give us more of their gold; if, however, they refused to sign the treaty, it became necessary to bring them to reason, and for this purpose an armament was fitted out to attack a people who, by lessening our wealth, had deprived us of that money by which alone trade could be extended in foreign markets.²

¹ This favorite doctrine is illustrated in a curious "Discourse," written in 1578, and printed in Stow's London, in which it is laid down, that if our exports exceed our imports, we gain by the trade; but that if they are less, we lose (Stow's London, edited by Thoms, 1842, p. 205). Whenever this balance was disturbed, politicians were thrown into an agony of fear. In 1620 James I said, in one of his long speeches, "It's strange that my Mint hath not gone this eight or nine years: but I think the fault of the want of money is the uneven balancing of trade" (Parliamentary History, Vol. I, p. 1179). See also the debate "On the Scarcity of Money," pp. 1194-1196. In 1620 the House of Commons, in a state of great alarm, passed a resolution, "That the importation of tobacco out of Spain is one reason of the scarcity of money in this kingdom" (Parliamentary History, Vol. I, p. 1198). In 1627 it was actually argued in the House of Commons that the Netherlands were being weakened by their trade with the East Indies because it carried money out of the country! (Parliamentary History, Vol. II, p. 220). Half a century later the same principle was advocated by Sir William Temple in his Letters, and also in his Observations upon the United Provinces (Temple's Works, Vol. I, p. 175; Vol. II, pp. 117, 118).

² In 1672 the celebrated Earl of Shaftesbury, then Lord Chancellor, announced that the time had come when the English must go to war with the Dutch, for

This misconception of the true nature of barter was formerly universal,¹ and being adopted even by the ablest politicians was not only an immediate cause of war but increased those feelings of national hatred by which war is encouraged, each country thinking that it had a direct interest in diminishing the wealth of its neighbors.² In the seventeenth, or even late in the sixteenth, century there were, indeed, one or two eminent thinkers who exposed some of the fallacies upon which this opinion was based.³ But their arguments found no favor with those

that it was "impossible both should stand upon a balance, and that if we do not master their trade, they will ours. They or we must truckle. One must and will give the law to the other. There is no compounding where the contest is for the trade of the whole world" (Somers Tracts, Vol. VIII, p. 39). A few months later, still insisting on the propriety of the war, he gave as one of his reasons, that it "was necessary to the trade of England that there should be a fair adjustment of commerce in the East Indies" (Parliamentary History, Vol. IV, p. 587). In 1701 Stepney, a diplomatist and one of the lords of trade, published an essay, strongly insisting on the benefits which would accrue to English commerce by a war with France (Somers Tracts, Vol. XI, pp. 199, 217); and he says (p. 205) that one of the consequences of peace with France would be "the utter ruin and destruction of our trade." See also in Vol. XIII, p. 688, the remarks on the policy of William III. In 1743 Lord Hardwicke, one of the most eminent men of his time, said in the House of Lords, "If our wealth is diminished, it is time to ruin the commerce of that nation which has driven us from the markets of the Continent — by sweeping the seas of their ships, and by blockading their ports" (Campbell's Lives of the Chancellors, Vol. V, p. 89).

¹ In regard to the seventeenth century, see Mill's History of India, Vol. I, pp. 41, 42. To this I may add, that even Locke had very confused notions respecting the use of money in trade. See "Essay on Money," in Locke's Works, Vol. IV; and in particular, pp. 9, 10, 12, 20, 21, 49-52. Berkeley, profound thinker as he was, fell into the same errors, and assumes the necessity of maintaining the balance of trade, and lessening our imports in proportion as we lessen our exports. See the Querist, Nos. xcix, clxi, in Berkeley's Works, Vol. II, pp. 246, 250; see also his proposal for a sumptuary law, in "Essay towards preventing the Ruin of Great Britain," in Works, Vol. II, p. 190. [Also in the Querist, No. ciii.] The economical views of Montesquieu (*Esprit des Lois*, Livre XX, chap. xii, in Œuvres, p. 353) are as hopelessly wrong; while Vattel (*Droit des Gens*, Vol. I, pp. 111, 117, 118, 206) goes out of his way to praise the mischievous interference of the English government, which he recommends as a pattern to other states.

² The Earl of Bristol, a man of some ability, told the House of Lords in 1642 that it was a great advantage to England for other countries to go to war with each other, because by that means we should get their money, or, as he called it, their "wealth." See his speech in Parliamentary History, Vol. II, pp. 1274-1279.

³ Serra, who wrote in 1613, is said to have been the first to prove the absurdity of discouraging the exportation of the precious metals. See Twiss on the Progress

politicians by whom European affairs were then administered. It is doubtful if they were known; and it is certain that, if known, they were despised by statesmen and legislators, who, from the constancy of their practical occupations, cannot be supposed to have sufficient leisure to master each new discovery that is successively made, and who in consequence are, as a body, always in the rear of their age. The result was, that they went blundering on in the old track, believing that no commerce could flourish without their interference, troubling that commerce by repeated and harassing regulations, and taking for granted that it was the duty of every government to benefit the trade of its own people by injuring the trade of others.¹

But in the eighteenth century a long course of events, which I shall hereafter trace, prepared the way for a spirit of improvement and a desire for reform, of which the world had then seen

of Political Economy, pp. 8, 12, 13. But I believe that the earliest approach towards modern economical discoveries is a striking essay published in 1581, and ascribed to William Stafford. It will be found in the Harleian Miscellany, Vol. IX, pp. 139-192, edited by Park, 1812; and the title, "Brief Conceipt of English Policy," gives an inadequate idea of what is, on the whole, the most important work on the theory of politics which had then appeared, since the author not only displays an insight into the nature of price and value, such as no previous thinker possessed, but he points out clearly the causes of that system of inclosures which is the leading economical fact in the reign of Elizabeth, and is intimately connected with the rise of the poor-laws. Some account of this essay is given by Dr. Twiss, but the original is easily accessible, and should be read by every student of English history. Among other heretical propositions it recommends free trade in corn.

¹ In regard to the interference of the English legislature, it is stated by Mr. McCulloch (Political Economy, p. 269), on the authority of a committee of the House of Commons, that before the year 1820 "no fewer than two thousand laws with respect to commerce had been passed at different periods." It may be confidently asserted that every one of those laws was an unmitigated evil, since no trade, and indeed no interest of any kind, can be protected by government without inflicting immeasurably greater loss upon the unprotected interests and trades; while if the protection is universal, the loss will be universal. Some striking instances of the absurd laws which have been passed respecting trade are collected in Barrington's Observations on the Statutes, pp. 279-285. Indeed, it was considered necessary that every Parliament should do something in this way; and Charles II, in one of his speeches, says, "I pray, contrive any good short bills which may improve the industry of the nation . . . and so God bless your councils" (Parliamentary History, Vol. IV, p. 291). Compare the remarks on the fishery trade, in Somers Tracts, Vol. XII, p. 33.

no example. This great movement displayed its energy in every department of knowledge; and now it was that a successful attempt was first made to raise political economy to a science, by discovering the laws which regulate the creation and diffusion of wealth. In the year 1776 Adam Smith published his *Wealth of Nations*, which, looking at its ultimate results, is probably the most important book that has ever been written, and is certainly the most valuable contribution ever made by a single man towards establishing the principles on which government should be based. In this great work the old theory of protection as applied to commerce was destroyed in nearly all its parts;¹ the doctrine of the balance of trade was not only attacked but its falsehood was demonstrated; and innumerable absurdities, which had been accumulating for ages, were suddenly swept away.²

If the *Wealth of Nations* had appeared in any preceding century, it would have shared the fate of the great works of Stafford and Serra; and although the principles which it advocated would no doubt have excited the attention of speculative thinkers, they would in all probability have produced no effect on practical politicians, or, at all events, would only have exercised an indirect and precarious influence. But the diffusion of knowledge had now become so general that even our ordinary legislators were in some degree prepared for these great truths which in a former period they would have despised as idle novelties. The result was, that the doctrines of Adam Smith soon found their way into the House of Commons,³ and, being adopted by a few of the

¹ To this the only exception of any moment is the view taken of the usury laws, which Jeremy Bentham has the honor of demolishing.

² Before Adam Smith, the principal merit is due to Hume; but the works of that profound thinker were too fragmentary to produce much effect. Indeed, Hume, notwithstanding his vast powers, was inferior to Smith in comprehensiveness as well as in industry.

³ The first notice I have observed of the *Wealth of Nations* in Parliament is in 1783; and between then and the end of the century it is referred to several times, and latterly with increasing frequency. See *Parliamentary History*, Vol. XXIII, p. 1152; Vol. XXVI, pp. 481, 1035; Vol. XXVII, p. 385; Vol. XXIX, pp. 834, 905, 982, 1065; Vol. XXX, pp. 330, 333; Vol. XXXII, p. 2; Vol. XXXIII, pp. 353, 386, 522, 548, 549, 563, 774, 777, 778, 822, 823, 824, 825, 827, 1249; Vol. XXXIV, pp. 11, 97, 98, 141, 142, 304, 473, 850, 901, 902, 903. It is possible that one or two passages may have been overlooked; but I believe that these are

leading members, were listened to with astonishment by that great assembly whose opinions were mainly regulated by the wisdom of their ancestors, and who were loth to believe that anything could be discovered by the moderns which was not already known to the ancients. But it is in vain that such men as these always set themselves up to resist the pressure of advancing knowledge. No great truth, which has once been found, has ever afterwards been lost, nor has any important discovery yet been made which has not eventually carried everything before it. Even so, the principles of free trade, as demonstrated by Adam Smith, and all the consequences which flow from them, were vainly struggled against by the most overwhelming majorities of both houses of Parliament. Year by year the great truth made its way,—always advancing, never receding.¹ The majority was at first deserted by a few men of ability, then by ordinary men, then it became a minority, then even the minority began to dwindle; and at the present day, eighty years after the publication of Smith's *Wealth of Nations*, there is not to be found any one of tolerable education who is not ashamed of holding opinions which, before the time of Adam Smith, were universally received.

Such is the way in which great thinkers control the affairs of men, and by their discoveries regulate the march of nations. And truly the history of this one triumph alone should be enough to repress the presumption of statesmen and legislators, who so exaggerate the importance of their craft as to ascribe

the only instances of Adam Smith being referred to during seventeen years. From a passage in *Pellevé's Life of Sidmouth*, Vol. I, p. 51, it appears that even Addington was studying Adam Smith in 1787.

¹ In 1797 Pulteney, in one of his financial speeches, appealed to "the authority of Dr. Smith, who, it was well said, would persuade the present generation and govern the next" (*Parliamentary History*, Vol. XXXIII, p. 778). In 1813 Dugald Stewart (*Philosophy of the Human Mind*, Vol. II, p. 472) announced that the doctrine of free trade "has now, I believe, become the prevailing creed of thinking men all over Europe." And in 1816 Ricardo said: "The reasoning by which the liberty of trade is supported is so powerful that it is daily obtaining converts. It is with pleasure that I see the progress which this great principle is making amongst those whom we should have expected to cling the longest to old prejudices" ("Proposals for an Economical Currency," in *Ricardo's Works*, p. 407).

great results to their own shifting and temporary contrivances. For whence did they derive that knowledge of which they are always ready to assume the merit? How did they obtain their opinions? How did they get at their principles? These are the elements of their success; and these they can only learn from their masters, — from those great teachers who, moved by the inspiration of genius, fertilize the world with their discoveries. Well may it be said of Adam Smith, and said too without fear of contradiction, that this solitary Scotchman has, by the publication of one single work, contributed more towards the happiness of man than has been effected by the united abilities of all the statesmen and legislators of whom history has preserved an authentic account.

The result of these great discoveries I am not here concerned to examine, except so far as they aided in diminishing the energy of the warlike spirit. And the way in which they effected this may be easily stated. As long as it was generally believed that the wealth of a country consists of its gold, it was of course also believed that the sole object of trade is to increase the influx of the precious metals; it therefore became natural that government should be expected to take measures by which such influx could be secured. This, however, could only be done by draining other countries of their gold, — a result which they, for precisely the same reasons, strenuously resisted. The consequence was, that any idea of real reciprocity was impossible; every commercial treaty was an attempt made by one nation to outwit another;¹ every new tariff was a declaration of hostility; and that which ought to be the most peaceable of all pursuits became one of the causes of those national jealousies and national animosities

¹ Sir Theodore Janson, in his *General Maxims of Trade*, published in 1713, lays it down as a principle universally recognized, that "All the nations of Europe seem to strive who shall outwit one another in point of trade; and they concur in this maxim, That the less they consume of foreign commodities, the better it is for them" (*Somers Tracts*, Vol. XIII, p. 292). Thus, too, in a *Dialogue between an Englishman and a Dutchman*, published in 1700, the Dutchman is represented as boasting that his government had "forced treaties of commerce exclusive to all other nations" (*Somers Tracts*, Vol. XI, p. 376). This is the system of "narrow selfishness" denounced by Dr. Story, in his noble work, *Conflict of Laws*, 1841, p. 32.

by which war is mainly promoted.¹ But when it was once clearly understood that gold and silver are not wealth but are merely the representatives of wealth ; when men began to see that wealth itself solely consists of the value which skill and labor can add to the raw material, and that money is of no possible use to a nation except to measure and circulate their riches, — when these great truths were recognized,² all the old notions respecting the balance of trade and the supreme importance of the precious metals at once fell to the ground. These enormous errors being dispersed, the true theory of barter was easily worked out. It was perceived that if commerce is allowed to be free, its advantages will be shared by every country which engages in it ; that, in the absence of monopoly, the benefits of trade are of necessity reciprocal ; and that, so far from depending on the amount of gold received, they simply arise from the facility with which a nation gets rid of those commodities which it can produce most cheaply, and receives in return those commodities which it could only produce at a great expense, but which the other nation can, from the skill of its workmen, or from the bounty of nature, afford to supply at a lower rate. From this it follows that in a mercantile point of view it would be as absurd to attempt to impoverish a people with whom we trade as it would be in a tradesman to wish for the insolvency of a rich and frequent customer. The result is, that the commercial spirit, which formerly was often warlike, is now invariably pacific.³ And although it is perfectly true that not one merchant out of

¹ "It cannot, indeed, be denied that mistaken views of commerce, like those so frequently entertained of religion, have been the cause of many wars and of much bloodshed" (M'Culloch's *Principles of Political Economy*, p. 140). See also pp. 37, 38: "It has made each nation regard the welfare of its neighbors as incompatible with its own ; hence the reciprocal desire of injuring and impoverishing each other ; and hence that spirit of commercial rivalry which has been the immediate or remote cause of the greater number of modern wars."

² On the rapid diffusion during the present century of the principles worked out by the economists, compare Laing's *Sweden*, pp. 356-358, with a note to the last edition of Malthus on *Population*, 1826, Vol. II, pp. 354, 355.

³ "The feelings of rival tradesmen, prevailing among nations, overruled for centuries all sense of the general community of advantage which commercial countries derive from the prosperity of one another ; and that commercial spirit, which is now

a hundred is familiar with the arguments on which these economical discoveries are founded, that does not prevent the effect which the discoveries themselves produce on his own mind. The mercantile class is, like every other, acted upon by causes which only a few members of that class are able to perceive. Thus, for instance, of all the innumerable opponents of protection, there are very few indeed who can give valid reasons to justify their opposition. But this does not prevent the opposition from taking place. For an immense majority of men always follow with implicit submission the spirit of their own time; and the spirit of the times is merely its knowledge, and the direction that knowledge takes. As, in the ordinary avocations of daily life, every one is benefited in the increase of his comforts and of his general security by the progress of many arts and sciences, of which perhaps he does not even know the name, just so is the mercantile class benefited by those great economical discoveries which, in the course of two generations, have already effected a complete change in the commercial legislation of this country, and which are now operating slowly but steadily upon those other European states, where, public opinion being less powerful, it is more difficult to establish great truths and extirpate old abuses. While, therefore, it is perfectly true that among merchants a comparatively small number are acquainted with political economy, it is not the less true that they owe a large part of their wealth to the political economist, who, by removing the obstacles with which the ignorance of successive governments had impeded trade, have now settled on a solid foundation that commercial prosperity which is by no means the least of our national glories. Most assuredly is it also true that this same intellectual movement has lessened the chance of war by ascertaining the principles which ought to regulate our commercial relations with foreign countries, by proving not only the inutility

one of the strongest obstacles to wars, was during a certain period of European history their principal cause" (Mill's Political Economy, 1849, Vol. II, p. 221). This great change in the feelings of the commercial classes did not begin before the present century, and has not been visible to ordinary observers until the last five and twenty or thirty years; but it was foretold in a remarkable passage written by Herder in 1787: see his *Ideen zur Geschichte*, Vol. III, pp. 292, 293.

but the positive mischief caused by interfering with them, and finally, by exploding those long-established errors which, inducing men to believe that nations are the natural enemies of each other, encouraged those evil feelings and fostered those national jealousies to the strength of which the military spirit owed no small share of its former influence.

The third great cause by which the love of war has been weakened is the way in which discoveries respecting the application of steam to the purposes of traveling have facilitated the intercourse between different countries, and thus aided in destroying that ignorant contempt which one nation is too apt to feel for another. Thus, for instance, the miserable and impudent falsehoods which a large class of English writers formerly directed against the morals and private character of the French, and, to their shame be it said, even against the chastity of French women, tended not a little to embitter the angry feelings then existing between the two first countries of Europe, irritating the English against French vices, irritating the French against English calumnies. In the same way there was a time when every honest Englishman firmly believed that he could beat ten Frenchmen, — a class of beings whom he held in sovereign contempt, as a lean and stunted race, who drank claret instead of brandy, who lived entirely off frogs; miserable infidels, who heard mass every Sunday, who bowed down before idols, and who even worshiped the pope. On the other hand, the French were taught to despise us as rude, unlettered barbarians, without either taste or humanity, — surly, ill-conditioned men, living in an unhappy climate where a perpetual fog, only varied by rain, prevented the sun from ever being seen, suffering from so deep and inveterate a melancholy that physicians had called it the English spleen, and under the influence of this cruel malady constantly committing suicide, particularly in November, when we were well known to hang and shoot ourselves by thousands.¹

¹ That there are more suicides in gloomy weather than in fine weather used always to be taken for granted, and was a favorite topic with the French wits, who were never weary of expatiating on our love of self-murder, and on the relation

Whoever has looked much into the older literature of France and England knows that these were the opinions which the two first nations of Europe, in the ignorance and simplicity of their hearts, held respecting each other. But the progress of improvement, by bringing the two countries into close and intimate contact, has dissipated these foolish prejudices, and taught each people to admire, and, what is still more important, to respect each other. And the greater the contact, the greater the respect. For whatever theologians may choose to assert, it is certain that mankind at large has far more virtue than vice, and that in every country good actions are more frequent than bad ones. Indeed, if this were otherwise, the preponderance of evil would long since have destroyed the human race, and not even have left a single man to lament the degeneracy of his species. An additional proof of this is the fact that the more nations associate with each other, and the more they see and know of their fellow-creatures, the more quickly do ancient enmities disappear. This is because an enlarged experience proves that mankind is not so radically bad as we from our infancy are taught to believe. But if vices were really more frequent than virtues, the result would be that the increasing amalgamation of society would increase our bad opinion of others, because though we may love our own vices we do not generally love the vices of our neighbors. So far, however, is this from being the actual consequence that it has always been found that those whose extensive knowledge makes them best acquainted with the general course of human actions are precisely those who take the most favorable view of them. The greatest observer and the most profound thinker is invariably the most lenient judge. It is the solitary misanthrope, brooding over his fancied wrongs, who is most prone to depreciate the good qualities of our nature and exaggerate its bad ones. Or else it is some foolish and ignorant monk who, dreaming away his

between it and our murky climate. Unfortunately for such speculations, the fact is exactly opposite to what is generally supposed, and we have decisive evidence that there are more suicides in summer than in winter. See Quetelet, *Sur l'Homme*, Vol. II, pp. 152, 158; Tissot, *De la Manie du Suicide*, Paris, 1840, pp. 50, 149, 150; *Journal of Statistical Society*, Vol. I, p. 102; Winslow's *Anatomy of Suicide*, 1840, pp. 131, 132; Hawkins' *Medical Statistics*, p. 170.

existence in an idle solitude, flatters his own vanity by denouncing the vices of others, and thus declaiming against the enjoyments of life revenges himself on that society from which by his own superstition he is excluded. These are the sort of men who insist most strongly on the corruption of our nature, and on the degeneracy into which we have fallen. The enormous evil which such opinions have brought about is well understood by those who have studied the history of countries in which they are, and have been, most prevalent. Hence it is that among the innumerable benefits derived from advancing knowledge there are few more important than those improved facilities of communication,¹ which, by increasing the frequency with which nations and individuals are brought into contact, have to an extraordinary extent corrected their prejudices, raised the opinion which each forms of the other, diminished their mutual hostility, and, thus diffusing a more favorable view of our common nature, have stimulated us to develop those boundless resources of the human understanding the very existence of which it was once considered almost a heresy to assert.

This is precisely what has occurred in modern Europe. The French and English people have, by the mere force of increased contact, learned to think more favorably of each other, and to discard that foolish contempt in which both nations formerly indulged. In this, as in all cases, the better one civilized country is acquainted with another, the more it will find to respect and to imitate. For of all the causes of national hatred, ignorance is the most powerful. When you increase the contact you remove the ignorance, and thus you diminish the hatred.² This is the

¹ Respecting which I will only mention one fact, in regard to our own country. By the returns of the Board of Trade, it appears that the passengers annually traveling by railway amounted in 1842 to nineteen millions; but in 1852 they had increased to more than eighty-six millions (*Journal of Statistical Society*, Vol. XVI, p. 292).

² Of this Mr. Stephens (in his valuable work, *Central America*, Vol. I, pp. 247-248) relates an interesting instance in the case of that remarkable man Carrera: "Indeed, in no particular had he changed more than in his opinion of foreigners; a happy illustration of the effect of personal intercourse in breaking down prejudices against individuals or classes." Mr. Elphinstone (*History of India*, p. 195) says, "Those who have known the Indians longest have always the best opinion of

true bond of charity; and it is worth all the lessons which moralists and divines are able to teach. They have pursued their vocation for centuries, without producing the least effect in lessening the frequency of war. But it may be said, without the slightest exaggeration, that every new railroad which is laid down, and every fresh steamer which crosses the Channel, are additional guarantees for the preservation of that long and unbroken peace which, during forty years, has knit together the fortunes and the interests of the two most civilized nations of the earth.

I have thus, so far as my knowledge will permit, endeavored to indicate the causes which have diminished religious persecution and war, — the two greatest evils with which men have yet contrived to afflict their fellow-creatures. The question of the decline of religious persecution I have only briefly noticed, because it will be more fully handled in a subsequent part of this volume. Enough, however, has been advanced to prove how essentially it is an intellectual process, and how little good can be effected on this subject by the operation of moral feelings. The causes of the decline of the warlike spirit I have examined at considerable and, perhaps to some readers, at tedious length; and the result of that examination has been, that the decline is owing to the increase of the intellectual classes, to whom the military classes are necessarily antagonistic. In pushing the inquiry a little deeper we have, by still further analysis, ascertained the existence of three vast though subsidiary causes by which the general movement has been accelerated. These are the invention of gunpowder, the discoveries of political economy, and the discovery of improved means of locomotion. Such are the three great modes or channels by which the progress of knowledge has weakened the old warlike spirit; and the way in which they have effected this has, I trust, been clearly pointed out. The facts and arguments which I have brought forward have, I can conscientiously say, been subjected to careful and

them; but *this is rather a compliment to human nature than to them, since it is true of every other people.*" Compare an instructive passage in Darwin's *Journal of Researches*, p. 421, with Burdach, *Traité de Physiologie comme Science d'Observation*, Vol. II, p. 61.

repeated scrutiny ; and I am quite unable to see on what possible ground their accuracy is to be impugned. That they will be disagreeable to certain classes, I am well aware ; but the unpleasantness of a statement is hardly to be considered a proof of its falsehood. The sources from which the evidence has been derived are fully indicated ; and the arguments, I hope, fairly stated. And from them there results a most important conclusion. From them we are bound to infer that the two oldest, greatest, most inveterate, and most widely spread evils which have ever been known are constantly, though on the whole slowly, diminishing ; and that their diminution has been effected not at all by moral feelings, nor by moral teachings, but solely by the activity of the human intellect, and by the inventions and discoveries which, in a long course of successive ages, man has been able to make.

Since, then, in the two most important phenomena which the progress of society presents the moral laws have been steadily and invariably subordinate to the intellectual laws, there arises a strong presumption that in inferior matters the same process has been followed. To prove this in its full extent, and thus raise the presumption to an absolute certainty, would be to write not an introduction to history but the history itself. The reader must therefore be satisfied for the present with what, I am conscious, is merely an approach towards demonstration ; and the complete demonstration must necessarily be reserved for the future volumes of this work, in which I pledge myself to show that the progress Europe has made from barbarism to civilization is entirely due to its intellectual activity ; that the leading countries have now, for some centuries, advanced sufficiently far to shake off the influence of those physical agencies by which in an earlier state their career might have been troubled ; and that although the moral agencies are still powerful, and still cause occasional disturbances, these are but aberrations which, if we compare long periods of time, balance each other, and thus in the total amount entirely disappear. So that, in a great and comprehensive view, the changes in every civilized people are, in their aggregate, dependent solely on three things : first, on the amount

of knowledge possessed by their ablest men ; secondly, on the direction which that knowledge takes, that is to say, the sort of subjects to which it refers ; thirdly, and above all, on the extent to which the knowledge is diffused, and the freedom with which it pervades all classes of society.

These are the three great movers of every civilized country ; and although their operation is frequently disturbed by the vices or the virtues of powerful individuals, such moral feelings correct each other, and the average of long periods remains unaffected. Owing to causes of which we are ignorant, the moral qualities do, no doubt, constantly vary, so that in one man, or perhaps even in one generation, there will be an excess of good intentions, in another an excess of bad ones. But we have no reason to think that any permanent change has been effected in the proportion which those who naturally possess good intentions bear to those in whom bad ones seem to be inherent. In what may be called the innate and original morals of mankind, there is, so far as we are aware, no progress. Of the different passions with which we are born, some are more prevalent at one time, some at another ; but experience teaches us that, as they are always antagonistic, they are held in balance by the force of their own opposition. The activity of one motive is corrected by the activity of another. For to every vice there is a corresponding virtue. Cruelty is counteracted by benevolence, sympathy is excited by suffering, the injustice of some provokes the charity of others, new evils are met by new remedies, and even the most enormous offenses that have ever been known have left behind them no permanent impression. The desolation of countries and the slaughter of men are losses which never fail to be repaired, and at the distance of a few centuries every vestige of them is effaced. The gigantic crimes of Alexander or Napoleon become after a time void of effect, and the affairs of the world return to their former level. This is the ebb and flow of history, the perpetual flux to which by the laws of our nature we are subject. Above all this, there is a far higher movement ; and as the tide rolls on, now advancing, now receding, there is, amid its endless fluctuations, one thing, and one alone, which endures

forever. The actions of bad men produce only temporary evil, the actions of good men only temporary good ; and eventually the good and the evil altogether subside, are neutralized by subsequent generations, absorbed by the incessant movement of future ages. But the discoveries of great men never leave us ; they are immortal, they contain those eternal truths which survive the shock of empires, outlive the struggles of rival creeds, and witness the decay of successive religions. All these have their different measures and their different standards ; one set of opinions for one age, another set for another. They pass away like a dream ; they are as the fabric of a vision, which leaves not a track behind. The discoveries of genius alone remain : it is to them we owe all that we now have ; they are for all ages and all times ; never young, and never old, they bear the seeds of their own life ; they flow on in a perennial and undying stream ; they are essentially cumulative, and giving birth to the additions which they subsequently receive, they thus influence the most distant posterity, and after the lapse of centuries produce more effect than they were able to do even at the moment of their promulgation.

XVI

SYMPATHY¹

How selfish soever man may be supposed, there are evidently some principles in his nature which interest him in the fortunes of others, and render their happiness necessary to him, though he derives nothing from it except the pleasure of seeing it. Of this kind is pity or compassion, the emotion which we feel for the misery of others when we either see it, or are made to conceive it in a very lively manner. That we often derive sorrow from the sorrow of others is a matter of fact too obvious to require any instances to prove it ; for this sentiment, like all the other original passions of human nature, is by no means confined to the virtuous and humane, though they perhaps may feel it with the most exquisite sensibility. The greatest ruffian, the most hardened violator of the laws of society, is not altogether without it.

As we have no immediate experience of what other men feel, we can form no idea of the manner in which they are affected but by conceiving what we ourselves should feel in the like situation. Though our brother is upon the rack, as long as we ourselves are at our ease, our senses will never inform us of what he suffers. They never did, and never can, carry us beyond our own person, and it is by the imagination only that we can form any conception of what are his sensations. Neither can that faculty help us to this any other way than by representing to us what would be our own, if we were in his case. It is the impressions of our own senses only, not those of his, which our imaginations copy. By the imagination we place ourselves in his situation, we conceive ourselves enduring all the same torments, we enter as it were into his body, and become in some measure the same person with him, and thence form some idea of his

¹ From *The Theory of Moral Sentiments*, by Adam Smith, chap. i.

sensations, and even feel something which, though weaker in degree, is not altogether unlike them. His agonies, when they are thus brought home to ourselves, when we have thus adopted and made them our own, begin at last to affect us, and we then tremble and shudder at the thought of what he feels. For as to be in pain or distress of any kind excites the most excessive sorrow, so to conceive or to imagine that we are in it excites some degree of the same emotion, in proportion to the vivacity or dullness of the conception.

That this is the source of our fellow-feeling for the misery of others, that it is by changing places in fancy with the sufferer that we come either to conceive or to be affected by what he feels, may be demonstrated by many obvious observations, if it should not be thought sufficiently evident of itself. When we see a stroke aimed and just ready to fall upon the leg or arm of another person we naturally shrink and draw back our own leg or our own arm ; and when it does fall we feel it in some measure, and are hurt by it as well as the sufferer. The mob, when they are gazing at a dancer on the slack rope, naturally writhe and twist and balance their own bodies, as they see him do, and as they feel that they themselves must do if in his situation. Persons of delicate fibers and a weak constitution of body complain that in looking on the sores and ulcers which are exposed by beggars in the streets they are apt to feel an itching or uneasy sensation in the corresponding part of their own bodies. The horror which they conceive at the misery of those wretches affects that particular part in themselves more than any other, because that horror arises from conceiving what they themselves would suffer if they really were the wretches whom they are looking upon, and if that particular part in themselves was actually affected in the same miserable manner. The very force of this conception is sufficient, in their feeble frames, to produce that itching or uneasy sensation complained of. Men of the most robust make observe that in looking upon sore eyes they often feel a very sensible soreness in their own, which proceeds from the same reason, that organ being in the strongest man more delicate than any other part of the body is in the weakest.

Neither is it those circumstances only which create pain or sorrow that call forth our fellow-feeling. Whatever is the passion which arises from any object in the person principally concerned, an analogous emotion springs up, at the thought of his situation, in the breast of every attentive spectator. Our joy for the deliverance of those heroes of tragedy or romance who interest us is as sincere as our grief for their distress, and our fellow-feeling with their misery is not more real than that with their happiness. We enter into their gratitude towards those faithful friends who did not desert them in their difficulties; and we heartily go along with their resentment against those perfidious traitors who injured, abandoned, or deceived them. In every passion of which the mind of man is susceptible, the emotions of the bystander always correspond to what, by bringing the case home to himself, he imagines would be the sentiments of the sufferer.

Pity and compassion are words appropriated to signify our fellow-feeling with the sorrow of others. Sympathy, though its meaning was, perhaps, originally the same, may now, however, without much impropriety, be made use of to denote our fellow-feeling with any passion whatever.

Upon some occasions sympathy may seem to arise merely from the view of a certain emotion in another person. The passions, upon some occasions, may seem to be transfused from one man to another, instantaneously, and antecedent to any knowledge of what excited them in the person principally concerned. Grief and joy, for example, strongly expressed in the look and gestures of any person, at once affect the spectator with some degree of a like painful or agreeable emotion. A smiling face is, to everybody that sees it, a cheerful object; as a sorrowful countenance, on the other hand, is a melancholy one.

This, however, does not hold universally, or with regard to every passion. There are some passions of which the expressions excite no sort of sympathy, but before we are acquainted with what gave occasion to them serve rather to disgust and provoke us against them. The furious behavior of an angry man is more likely to exasperate us against himself than against his enemies.

As we are unacquainted with his provocation, we cannot bring his case home to ourselves, nor conceive anything like the passions which it excites. But we plainly see what is the situation of those with whom he is angry, and to what violence they may be exposed from so enraged an adversary. We therefore readily sympathize with their fear or resentment, and are immediately disposed to take part against the man from whom they appear to be in danger.

If the very appearances of grief and joy inspire us with some degree of the like emotions, it is because they suggest to us the general idea of some good or bad fortune that has befallen the person in whom we observe them; and in these passions this is sufficient to have some little influence upon us. The effects of grief and joy terminate in the person who feels those emotions, of which the expressions do not, like those of resentment, suggest to us the idea of any other person for whom we are concerned, and whose interests are opposite to his. The general idea of good or bad fortune, therefore, creates some concern for the person who has met with it, but the general idea of provocation excites no sympathy with the anger of the man who has received it. Nature, it seems, teaches us to be more averse to enter into this passion, and till informed of its cause to be disposed rather to take part against it.

Even our sympathy with the grief or joy of another before we are informed of the cause of either is always extremely imperfect. General lamentations, which express nothing but the anguish of the sufferer, create rather a curiosity to inquire into his situation, along with some disposition to sympathize with him, than any actual sympathy that is very sensible. The first question which we ask is, What has befallen you? Till this be answered, though we are uneasy both from the vague idea of his misfortune, and still more from torturing ourselves with conjectures about what it may be, our fellow-feeling is not very considerable.

Sympathy, therefore, does not arise so much from the view of the passion as from that of the situation which excites it. We sometimes feel for another a passion, of which he himself seems to be altogether incapable, because when we put ourselves in

his case that passion arises in our breast from the imagination, though it does not in his from the reality. We blush for the impudence and rudeness of another, though he himself appears to have no sense of the impropriety of his own behavior, because we cannot help feeling with what confusion we ourselves should be covered had we behaved in so absurd a manner.

Of all the calamities to which the condition of mortality exposes mankind, the loss of reason appears, to those who have the least spark of humanity, by far the most dreadful; and they behold that last stage of human wretchedness with deeper commiseration than any other. But the poor wretch who is in it laughs and sings, perhaps, and is altogether insensible of his own misery. The anguish which humanity feels, therefore, at the sight of such an object cannot be the reflection of any sentiment of the sufferer. The compassion of the spectator must arise altogether from the consideration of what he himself would feel if he were reduced to the same unhappy situation, and, what perhaps is impossible, were at the same time able to regard it with his present reason and judgment.

What are the pangs of a mother when she hears the moanings of her infant that during the agony of disease cannot express what it feels? In her idea of what it suffers, she joins to its real helplessness her own consciousness of that helplessness and her own terrors for the unknown consequences of its disorder; and out of all these, she forms for her own sorrow the most complete image of misery and distress. The infant, however, feels only the uneasiness of the present instant, which can never be great. With regard to the future, it is perfectly secure, and in its thoughtlessness and want of foresight, it possesses an antidote against fear and anxiety,—the great tormentors of the human breast,—from which reason and philosophy will, in vain, attempt to defend it when it grows up to be a man.

We sympathize even with the dead, and overlooking what is of real importance in their situation, that awful futurity which awaits them, we are chiefly affected by those circumstances which strike our senses, but can have no influence upon their happiness. It is miserable, we think, to be deprived of the light

of the sun, to be shut out from life and conversation, to be laid in the cold grave a prey to corruption and the reptiles of the earth, to be no more thought of in this world but to be obliterated in a little time from the affections, and almost from the memory, of their dearest friends and relations. Surely we imagine we can never feel too much for those who have suffered so dreadful a calamity. The tribute of our fellow-feeling seems doubly due to them now when they are in danger of being forgotten by everybody; and by the vain honors which we pay to their memory, we endeavor for our own misery artificially to keep alive our melancholy remembrance of their misfortune. That our sympathy can afford them no consolation seems to be an addition to their calamity; and to think that all we can do is unavailing, and that what alleviates all other distress — the regret, the love, and the lamentations of their friends — can yield no comfort to them serves only to exasperate our sense of their misery. The happiness of the dead, however, most assuredly is affected by none of these circumstances, nor is it the thought of these things which can ever disturb the profound security of their repose. The idea of that dreary and endless melancholy which the fancy naturally ascribes to their condition arises altogether from our joining to the change, which has been produced upon them, our own consciousness of that change, from our putting ourselves in their situation, and from our lodging, if I may be allowed to say so, our own living souls in their inanimate bodies, and thence conceiving what would be our emotions in this case. It is from this very illusion of the imagination that the foresight of our own dissolution is so terrible to us, and that the idea of those circumstances, which undoubtedly can give us no pain when we are dead, makes us miserable while we are alive. And from thence arises one of the most important principles in human nature, the dread of death, the great poison to the happiness, but the great restraint upon the injustice of mankind, which, while it afflicts and mortifies the individual, guards and protects the society.

XVII

FORESIGHT¹

In the advance to high stages of civilization, the extension of the correspondence in time is most conspicuously exemplified in the habitual adjustment of our theories and actions to sequences more or less remote in the future. In no other respect is civilized man more strikingly distinguished from the barbarian than in his power to adapt his conduct to future events, whether contingent or certain to occur. The ability to forego present enjoyment in order to avoid the risk of future disaster is what we call prudence or providence; and the barbarian is above all things imprudent and improvident. Doubtless the superior prudence of the civilized man is due in great part to his superior power of self-restraint, so that this class of phenomena may be regarded as illustrating one of the phases of moral progress. Nevertheless, there are several purely intellectual elements which enter as important factors into the case. The power of economizing in harvest time or in youth, in order to retain something upon which to live comfortably in winter or in old age, is obviously dependent upon the vividness with which distant sets of circumstances can be pictured in the imagination. The direction of the volitions involved in the power of self-restraint must be to a great extent determined by the comparative vividness with which the distant circumstances and the present circumstances are mentally realized. And the power of distinctly imagining objective relations not present to sense is probably the most fundamental of the many intellectual differences between the civilized man and the barbarian, since it underlies both the class of phenomena which we are now considering, and the class of phenomena comprised in artistic, scientific, and philosophic progress. The savage, with his small and

¹ From *Outlines of Cosmic Philosophy*, by John Fiske, Part II, chap. xxi, pp. 303-306 (copyright, 1874). By permission of Houghton, Mifflin & Co.)

undeveloped cerebrum, plays all summer, like the grasshopper in the fable, eating and wasting whatever he can get ; for although he knows that the dreaded winter is coming, during which he must starve and shiver, he is nevertheless unable to realize these distant feelings with sufficient force to determine his volition in the presence of his actual feeling of repugnance to toil. But the civilized man, with his large and complex cerebrum, has so keen a sense of remote contingencies that he willingly submits to long years of drudgery in order to avoid poverty in old age, pays out each year a portion of his hard-earned money to provide for losses by fire which may never occur, builds houses and accumulates fortunes for posterity to enjoy, and now and then enacts laws to forestall possible disturbances or usurpations a century hence. Again, the progress of scientific knowledge, familiarizing civilized man with the idea of an inexorable regularity of sequence among events, greatly assists him in the adjustment of his actions to far-distant emergencies. He who ascribes certain kinds of suffering to antecedent neglect of natural laws is more likely to shape his conduct so as to avoid a recurrence of the infliction than he who attributes the same kinds of suffering to the wrath of an offended quasi-human Deity and fondly hopes by ceremonial propitiation of the Deity to escape in future.

This power of shaping actions so as to meet future contingencies has been justly recognized by political economists as an indispensable prerequisite to the accumulation of wealth in any community, without which no considerable degree of progress can be attained. The impossibility of getting barbarians to work, save under the stimulus of actually present necessities, has been one of the chief obstacles in the way of missionaries who have attempted to civilize tribal communities. The Jesuits, in the seventeenth century, were the most successful of Christian missionaries, and their proceedings with the Indians of Paraguay constitute one of the most brilliant feats in missionary annals. Nevertheless, the superficiality of all this show of civilization was illustrated by the fact that unless perpetually watched the workmen would go home leaving their oxen yoked to the plow, or would even cut them up for supper if no other meat happened to be at

hand. Examples of a state of things intermediate between this barbaric improvidence and the care-taking foresight of the European are to be found among the Chinese, — a people who have risen far above barbarism, but whose civilization is still of a primitive type. The illustration is rendered peculiarly forcible by the fact that the Chinese are a very industrious people, and where the returns for labor are immediate will work as steadily as Germans or Americans. Owing to their crowded population, every rood of ground is needed for cultivation, and upon their great rivers the traveler continually meets with little floating farms, constructed upon rafts and held in place by anchors. Yet side by side with these elaborate but fragile structures are to be seen acres of swamp land, which only need a few years of careful draining to become permanently fit for tillage. So incapable are the Chinese of adapting their actions to sequences at all remote, that they continue, age after age, to resort to such temporary devices rather than to bestow their labor where its fruits, however enduring, cannot be enjoyed from the outset. The contrast proves that the cause is the intellectual inability to realize vividly a group of future conditions involving benefits not immediately to be felt.

Of the correspondence in time, even more forcibly than of the correspondence in space, it may be said that its extension during the process of social evolution has been much greater than during the organic evolution of the human race from some ancestral primate. Between the Australian, on the one hand, who cannot estimate the length of a month, or provide even for certain disaster which does not stare him in the face, and whose theory of things is adapted only to events which occur during his own lifetime, and, on the other hand, the European, with his practical foresight, his elaborate scientific previsions, and his systems of philosophy, which embrace alike the earliest traceable cosmical changes and the latest results of civilization, the intellectual gulf is certainly far wider than that which divides the Australian from the fox, who hides the bird which he has killed in order to return when hungry to eat it.

XVIII

THE FUNCTION OF RELIGIOUS BELIEFS IN THE EVOLUTION OF SOCIETY¹

Since science first seriously directed her attention to the study of social phenomena, the interest of workers has been arrested by the striking resemblances between the life of society and that of organic growths in general. We have, accordingly, had many elaborate parallels drawn by various scientific writers between the two, and "the social organism" has become a familiar expression in a certain class of literature. It must be confessed, however, that these comparisons have been, so far, neither as fruitful nor as suggestive as might naturally have been expected. The generalizations and abstractions to which they have led, even in the hands of so original a thinker as Mr. Herbert Spencer, are often, it must be acknowledged, forced and unsatisfactory; and it may be fairly said that a field of inquiry which looked at the outset in the highest degree promising has, on the whole, proved disappointing.

Yet that there is some analogy between the social life and organic life in general, history and experience most undoubtedly suggest. The pages of the historian seem to be filled with pictures of organic life, over the moving details of which the biologist instinctively lingers. We see social systems born in silence and obscurity. They develop beneath our eyes. They make progress until they exhibit a certain maximum vitality. They gradually decline, and finally disappear, having presented in the various stages certain well-marked phases which invariably accompany the development and dissolution of organic life where-soever encountered. It may be observed, too, that this idea of the life, growth, and decline of peoples is deeply rooted. It is

¹ From *Social Evolution*, by Benjamin Kidd, chap. v; Macmillan & Co., London and New York, 1895.

always present in the mind of the historian. It is to be met with continually in general literature. The popular imagination is affected by it. It finds constant expression in the utterances of public speakers and of writers in the daily press, who, ever and anon, remind us that our national life, or, it may be, the life of our civilization, must reach, if it has not already reached, its stage of maximum development, and that it must decline like others which have preceded it. That social systems are endowed with a definite principle of life seems to be taken for granted. Yet: What is this principle? Where has it its seat? What are the laws which control the development and decline of those so-called organic growths? Nay, more: What is the social organism itself? Is it the political organization of which we form part? Or is it the race to which we belong? Is it our civilization in general? Or, is it, as some writers would seem to imply, the whole human family in process of evolution? It must be confessed that the literature of our time furnishes no satisfactory answers to a large class of questions of this kind.

It is evident that if we are ever to lay broadly and firmly the foundations of a science of human society, there is one point above others at which attention must be concentrated. *The distinguishing feature of human history is the social development the race is undergoing. But the characteristic and exceptional feature of this development is the relationship of the individual to society.* We have seen in the preceding chapters that fundamental organic conditions of life render the progress of the race possible only under conditions which have never had, and which have not now, any sanction from the reason of a great proportion of the individuals who submit to them. The interests of the individual and those of the social organism, in the evolution which is proceeding, are not either identical or capable of being reconciled, as has been necessarily assumed in all those systems of ethics which have sought to establish a rational sanction for individual conduct. The two are fundamentally and inherently irreconcilable, and a large proportion of the existing individuals at any time have, as we saw, no personal interest whatever in this progress of the race, or in the

social development we are undergoing. Strange to say, however, man's reason, which has apparently given him power to suspend the onerous conditions to which he is subject, has never produced their suspension. His development has continued with unabated pace throughout history, and it is in full progress under our eyes.

The pregnant question with which we found ourselves confronted was, therefore: What has then become of human reason? It would appear that the answer has, in effect, been given. The central feature of human history, the meaning of which neither science nor philosophy has hitherto fully recognized, is, apparently, the struggle which man, throughout the whole period of his social development, has carried on to effect the subordination of his own reason. The motive power in this struggle has undoubtedly been supplied by his religious beliefs. The conclusion towards which we seem to be carried is, therefore, that the function of these beliefs in human evolution must be to provide a *super-rational* sanction for that large class of conduct in the individual necessary to the maintenance of the development which is proceeding, but for which there can never be, in the nature of things, any *rational* sanction.

The fact has been already noticed that evolutionary science is likely in our day to justify, as against the teaching of past schools of thought, one of the deepest and most characteristic of social instincts, viz., that which has consistently held the theories of that large group of philosophical writers who have aimed at establishing a rational sanction for individual conduct in society—a school which may be said to have culminated in England in “utilitarianism”—as being on the whole (to quote the words of Mr. Lecky) “profoundly immoral.”¹ It would appear that science must in the end also justify another instinct equally general, and also in direct opposition to a widely prevalent intellectual conception which is characteristic of our time.

From the beginning of the nineteenth century, and more particularly since Comte published his *Philosophie Positive*, an increasingly large number of minds in France, Germany, and

¹ History of European Morals, Vol. I, pp. 2, 3.

England (not necessarily, or even chiefly, those adhering to Comte's general views) have questioned the essentiality of the supernatural element in religious beliefs. In England a large literature has gradually arisen on the subject; and the vogue of books like *Natural Religion*, attributed to Professor J. R. Seeley, and others in which the subject has been approached from different standpoints, has testified to the interest which this view has excited. A large and growing intellectual party in our midst hold, in fact, the belief that the religion of the future must be one from which the super-rational element is eliminated.

Now, if we have been right so far, it would appear that one of the first results of the application of the methods and conclusions of biological science to human society must be to render it clear that the advocates of these views, like the adherents of that larger school of thought which has sought to find a rational basis for individual conduct in society, are in pursuit of something which can never exist. There can never be, it would appear, such a thing as a rational religion. The essential element in all religious beliefs must apparently be the *ultra-rational* sanction which they provide for social conduct. When the fundamental nature of the problem involved in our social evolution is understood, it must become clear that that general instinct which may be distinguished in the minds of men around us is in the main correct, and that

No form of belief is capable of functioning as a religion in the evolution of society which does not provide an ultra-rational sanction for social conduct in the individual.

In other words:

A rational religion is a scientific impossibility, representing from the nature of the case an inherent contradiction of terms.

The significance of this conclusion will become evident as we proceed. It opens up a new and almost unexplored territory. We come, it would appear, in sight of the explanation why science, if social systems are organic growths, has hitherto failed to enunciate the laws of their development, and has accordingly left us almost entirely in the dark as to the nature of the developmental forces and tendencies at work beneath the varied

and complex political and social phenomena of our time. The social system which constitutes an organic growth, endowed with a definite principle of life, and unfolding itself in obedience to laws which may be made the subject of exact study, is something quite different from that we have hitherto had vaguely in mind. It is not the political organization of which we form part; it is not the race to which we belong; it is not even the whole human family in process of evolution. The organic growth, it would appear, must be the social system or type of civilization founded on a form of religious belief. This is the organism which is the seat of a definite principle of life. Throughout its existence there is maintained within it a conflict of two opposing forces; the disintegrating principle represented by the rational self-assertiveness of the individual units; the integrating principle represented by a religious belief providing a sanction for social conduct which is always of necessity ultra-rational, and the function of which is to secure in the stress of evolution the continual subordination of the interests of the individual units to the larger interests of the longer-lived social organism to which they belong. It is, it would appear, primarily through these social systems that natural selection must reach and act upon the race. It is from the ethical systems upon which they are founded that the resulting types of civilization receive those specific characteristics which, in the struggle for existence, influence in a preponderating degree the peoples affected by them. It is in these ethical systems, founded on super-rational sanctions, and in the developments which they undergo, that we have the seat of a vast series of vital phenomena unfolding themselves under the control of definite laws which may be made the subject of study. The scientific investigation of these phenomena is capable, as we shall see, of throwing a flood of light not only upon the life history of our Western civilization in general but upon the nature of the developmental forces underlying the complex social and political movements actually in progress in the world around us.

But before following up this line of inquiry, let us see if the conclusion to which we have been led respecting the nature of

the element common to all religious beliefs can be justified when it is confronted with actual facts. Are we thus, it may be asked, able to unearth from beneath the enormous overgrowth of discussion and controversy to which this subject has given rise, the essential element in all religions, and to lay down a simple, but clear and concise principle upon which science may in future proceed in dealing with the religious phenomena of mankind?

It is evident, from what has been said, that our definition of a religion, in the sense in which alone science is concerned with religion as a social phenomenon, must run somewhat as follows :

A religion is a form of belief, providing an ultra-rational sanction for that large class of conduct in the individual where his interests and the interests of the social organism are antagonistic, and by which the former are rendered subordinate to the latter in the general interests of the evolution which the race is undergoing.

We have here the principle at the base of all religions. Any religion is, of course, more than this to its adherents; for it must necessarily maintain itself by what is often a vast system of beliefs and ordinances requiring acts and observances which only indirectly contribute to the end in question, by assisting to uphold the principles of the religion. It is these which tend to confuse the minds of many observers. With them we are not here concerned; they more properly fall under the head of theology.

Let us see, therefore, if this element of a super-rational sanction for conduct has been the characteristic feature of all religions, from those which have influenced men in a state of low social development up to those which now play so large a part in the life of highly civilized peoples; whether, despite recent theories to the contrary, there is to be discerned no tendency in those beliefs which are obviously still influencing large numbers of persons to eliminate it.

Beginning with man at the lowest stage at which his habits have been made a subject of study, we are met by a curious and conflicting mass of evidence respecting his religious beliefs.

The writers and observers whose opinions have been recorded are innumerable ; but they may be said to be divided into two camps on a fundamental point under discussion. In no stage of his development, in no society, and in no condition of society, is man found without religion of some sort, say one side. Whole societies of men and entire nations have existed without anything which can be described as a religion, say the other side. In one of the Gifford Lectures, Mr. Max Müller well describes the confusion existing among those who have undertaken to inform us on the subject. "Some missionaries," he says, "find no trace of religion where anthropologists see the place swarming with ghosts and totems and fetiches ; while other missionaries discover deep religious feelings in savages whom anthropologists declare perfectly incapable of anything beyond the most primitive sensuous perception." ¹ He goes on to show how these two parties occasionally change sides. "When the missionary," he declares, "wants to prove that no human being can be without some spark of religion, he sees religion everywhere, even in what is called totemism and fetichism ; while if he wants to show how necessary it is to teach and convert these irreligious races, he cannot paint their abject state in too strong colors, and he is apt to treat even their belief in an invisible and nameless God as mere hallucination. Nor is the anthropologist free from such temptations. If he wants to prove that, like the child, every race of men was at one time atheistic, then neither totems, nor fetiches, nor even prayers or sacrifices, are any proof in his eyes of an ineradicable religious instinct." ²

The dispute is an old one, and examples of the differences of opinion and statement referred to by Mr. Max Müller will be found in books like Sir John Lubbock's *Origin of Civilization and Prehistoric Times*, Tylor's *Primitive Culture and Researches into the Early History of Mankind*, Quatrefages' *L'Espèce Humaine*, and the more recent writings of Roskoff, Professor Gruppe, and others. In the considerable number of works which continually issue from the press, dealing with the habits

¹ *Natural Religion* (Gifford Lectures), p. 85.

² *Ibid.*, p. 87.

and beliefs of the lower races of men, this feature is very marked. A recent criticism of one of these (Mr. H. L. Roth's *Aborigines of Tasmania*) in *Nature* concludes: "Such is the nature of the evidence bearing on the religious ideas of the Tasmanians, which Mr. Roth has collected so carefully and so conscientiously. Nothing can be more full of contradictions, more doubtful, more perplexing. Yet, with such materials, our best anthropologists and sociologists have built up their systems. . . . There is hardly any kind of religion which could not be proved to have been the original religion of the Tasmanians." And it is even added that the evidence would serve equally well to show that the Tasmanians were "without any religious ideas or ceremonial usages."¹ Underlying all this, there is, evidently, a state of chaos as regards general principles. Different writers and observers, when they speak of the religion of lower races of men, do not refer to the same thing; they have themselves often no clear conception of what they mean by the expression. They do not know, in short, what to look for as the essential element in a religion.

Now there is one universal and noteworthy feature of the life of primitive man which a comparative study of his habits has revealed. "No savage," says Sir John Lubbock, "is free. All over the world his daily life is regulated by a complicated and apparently most inconvenient set of customs as forcible as laws."² We are now beginning to understand that it is these customs of savage man, strange and extraordinary as they appear to us, that in great measure take the place of the legal and moral codes which serve to hold society together and contribute to its further development in our advanced civilizations. The whole tendency of recent anthropological science is to establish the conclusion that these habits and customs, "as forcible as laws," either have or had, directly or indirectly, a utilitarian function to perform in the societies in which they exist. Mr. Herbert Spencer and others have already traced in many cases the important influence in the evolution of early society

¹ Vide *Nature*, September 18, 1890.

² *Origin of Civilization*, p. 301.

of those customs, habits, and ceremonies of savage man which at first sight often appear so meaningless and foolish to us ; and though this department of science is still young, there is no doubt as to the direction in which current research therein is leading us.

But if, on the one hand, we find primitive man thus everywhere under the sway of customs which we are to regard as none other than the equivalent of the legal and moral codes of higher societies ; and if, on the other hand, we find these customs everywhere as forcible as laws, how, it may be asked, are those unwritten laws of savage society enforced ? The answer comes prompt and without qualification. They are everywhere enforced in one and the same way. Observance of them is invariably secured by the fear of consequences from an agent which is always supernatural. This agent may, and does, assume a variety of forms, but one characteristic it never loses. It is always supernatural. We have here the explanation of the conflict of opinions regarding the religions of primitive man. Some writers assume that he is without religion because he is without a belief in a deity. Others because his deities are all evil. But, if we are right so far, it is not necessarily a belief in a deity, or in deities which are not evil, that we must look for as constituting the essential element in the religions of primitive men. The one essential and invariable feature must be a supernatural sanction of some kind for acts and observances which have a social significance. This sanction we appear always to have. We are never without the supernatural in some form. The essential fact which underlies all the prolonged and complicated controversy which has been waged over this subject was once put, with perhaps more force than reverence, by Professor Huxley into a single sentence. "There are savages without God in any proper sense of the word, but there are none without ghosts,"¹ said he ; and the generalization, however it may have been intended, expresses in effective form the one fundamental truth in the discussion with which science is concerned. It is the supernatural agents, the deities, spirits, ghosts,

¹ *Lay Sermons and Addresses*, p. 163.

with which primitive man peoples the air, water, rocks, trees, his dwellings and his implements, which everywhere provide the ultimate sanction used to enforce conduct which has a social significance of the kind in question. Whatever qualities these agents may be supposed to possess or to lack, one attribute they always have : they are invariably supernatural.

When we leave savage man, and rise a step higher to those societies which have made some progress towards civilization, we find the prevailing religions still everywhere possessing the same distinctive features ; they are always associated with social conduct, and they continue to be invariably founded on a belief in the supernatural. In the religion of the ancient Egyptians, we encounter this element at every point. Professor Tiele says that the two things which were specially characteristic of it were the worship of animals and the worship of the dead. The worship of the dead took the foremost place. "The animals worshiped — originally nothing but fetiches, which they continued to be for the great majority of the worshipers — were brought by the doctrinal expositions, and by the educated classes, into connection with certain particular gods, and thus came to be regarded as the terrestrial incarnation of these gods." The belief in the supernatural was the characteristic feature of the religion of the ancient Chinese, and this element has survived unchanged in it, through all the developments it has undergone down to our own day, as well as in the other forms of religious belief which influence the millions of the Celestial Empire at the present time. The religion of the ancient Assyrians presents the same essential features. It was a polytheism with a large number of deities who were objects of adoration. We already find in it some idea of a future life, and of rewards and punishments therein, the latter varying according to different degrees of wickedness in this life.

In the religions of the early Greeks and Romans, representing the forms of belief prevalent amongst peoples who eventually attained to the highest state of civilization anterior to our own, we have features of peculiar interest. The religion of the prehistoric ancestors of both peoples was in all probability a

form of ancestor-worship. The isolated family ruled by the head, with, as a matter of course, absolute power over the members, was the original unit alike in the religious and political systems of these peoples. At the death of some all-powerful head of this kind, his spirit was held in awe, and, as generations went on, the living master of the house found himself ruling simply as the vicegerent of the man from whom he had inherited his authority. Thus arose the family religion which was the basis of the Greek and Latin systems, all outside the family religion being regarded as aliens or enemies. As the family expanded in favorable circumstances into a related group (the Latin *gens*), and the *gens* in turn into clans (*phratriai*), and these again into tribes (*phylai*), an aggregate of which formed the city state or *polis*, the idea of family relationship remained the characteristic feature of the religion. All the groups, including the *polis*, were, as Sir G. W. Cox points out, religious societies, and the subordinate fellowships were "religious with an intensity scarcely to us conceivable." In the development which such a system underwent among the early Romans — a system hard, cruel, and un pitying, which necessarily led to the treatment of all outsiders as enemies or aliens fit only to be made slaves of or tributaries — we had the necessary religion for the people who eventually made themselves masters of the world, and in whom the military type of society ultimately culminated.

But if it is asked what the sanction was behind the religious requirements of these social groups, "religious with an intensity scarcely to us conceivable," the answer is still the same. There is no qualification. It is still invariably supernatural, using this term in the sense of ultra-rational. The conception of the supernatural has become a higher one than that which prevailed amongst primitive men, and the development in this direction may be distinguished actually in progress, but the belief in this sanction survives in all its force. The religions of ancient Greece and Rome at the period of their highest influence drew their strength everywhere from the belief in the supernatural, and it has to be observed that their decay dated from, and

progressed *pari passu* with, the decay of this belief. The Roman religion, which so profoundly influenced the development of Roman civilization, derived its influence throughout its history from the belief in the minds of men that its rules and ordinances had a supernatural origin. Summarizing its characteristics, Mr. Lecky says: "It gave a kind of official consecration to certain virtues and commemorated special instances in which they had been displayed; its local character strengthened patriotic feeling, its worship of the dead fostered a vague belief in the immortality of the soul; it sustained the supremacy of the father in the family, surrounded marriage with many imposing ceremonies, and created simple and reverent characters profoundly submissive to an overruling Providence and scrupulously observant of sacred rites."¹ A belief in the supernatural was in fact everywhere present, and it constituted the essential element of strength in the Roman religion.

If we turn again to Mohammedanism and Buddhism, forms of belief influencing large numbers of men at the present day outside our own civilization, we still find these essential features. The same sanction for conduct is always present. The essence of Buddhist morality Mr. Max Müller states to be a belief in *Karma*, that is, of work done in this or a former life which must go on producing effects. "We are born as what we deserve to be born; we are paying our penalty or receiving our reward in this life for former acts. This makes the sufferer more patient; for he feels that he is wiping out an old debt; while the happy man knows that he is living on the interest of his capital of good works, and that he must try to lay by more capital for a future life."² We have only to look for a moment to see that we have in this the same ultra-rational sanction for conduct. There is and can be no proof of such a theory; on the contrary, it assumes a cause operating in a manner altogether beyond the tests of reason and experience.

We may survey the whole field of man's religions in societies both anterior to and contemporaneous with our modern

¹ History of European Morals, Vol. I, pp. 176, 177.

² Natural Religion, p. 112.

civilization, and we shall find that all religious beliefs possess these characteristic features. There is no exception. Everywhere these beliefs are associated with conduct, having a social significance; and everywhere the ultimate sanction which they provide for the conduct which they prescribe is a super-rational one.

Coming at last to the advanced societies of the present day, we are met by a condition of things of great interest. The facts which appeared so confusing in the last chapter now fall into place with striking regularity. The observer remarks at the outset that there exist now, as at other times in the world's history, forms of belief intended to regulate conduct in which a super-rational sanction has no place. But, with no want of respect for the persons who hold these views, he finds himself compelled to immediately place such beliefs on one side. None of them, he notes, has *proved* itself to be a religion; none of them can so far claim to have influenced and moved large masses of men in the manner of a religion. He can find no exception to this rule. If he desired to accept any one of them as a religion, he notes that he would be constrained to do so merely on the *ipse dixit* of the small group of persons who chose so to describe it.

When we turn, however, to these forms of belief which are unquestionably influencing men in the manner of a religion, we have to mark that they have one pronounced and universal characteristic. The sanction they offer for the conduct they prescribe is unmistakably a super-rational one. We may regard the whole expanse of our modern civilization, and we shall have to note that there is no exception to this rule. Nay, more, we shall have to acknowledge, if we keep our minds free from confusion, that there is no tendency whatever to eliminate the super-rational element from religions. Individuals may lose faith, may withhold belief, and may found parties of their own; but among the religions themselves we shall find no evidence of any kind of movement or law of development in this direction. On the contrary, however these beliefs may differ from each other, or from the religions of the past, they have the one

feature in common that they all assert uncompromisingly that the rules of conduct which they enjoin have an ultra-rational sanction, and that right and wrong are right and wrong by divine or supernatural enactment outside of, and independent of, any other cause whatever.

This is true of every form of religion that we see influencing men in the world around us, from Buddhism to the Roman Catholic Church and the Salvation Army. The supernatural element in religion, laments Mr. Herbert Spencer, "survives in great strength down to our own day. Religious creeds, established and dissenting, all embody the belief that right and wrong are right and wrong simply in virtue of divine enactment."¹ This is so; but not apparently because of some meaningless instinct in man. It is so in virtue of a fundamental law of our social evolution. It is not that men perversely reject the light set before them by that school of ethics which has found its highest expression in Mr. Herbert Spencer's theories. It is simply that the deep-seated instincts of society have a truer scientific basis than our current science.

Finally, if our inquiry so far has led us to correct conclusions, we have the clew to a large class of facts which has attracted the notice of many observers, but which has hitherto been without scientific explanation. We see now why it is that, as Mr. Lecky asserts, "all religions which have governed mankind have done so . . . by speaking, as common religious language describes it, to the heart,"² and not to the intellect; or, as an advocate of Christianity has recently put it, A religion makes its way not by argument, or by the rational sanctions which it offers, "but by an appeal to those fundamental spiritual instincts of men to which it supremely corresponds."³ We see also why, despite the apparent tendency to the disintegration of religious belief among the intellectual classes at the present day, those who seek to compromise matters by getting rid of that feature which is the essential element in all religions make

¹ Data of Ethics, p. 50.

² History of European Morals, Vol. I, p. 58.

³ W. S. Lilly, in *Nineteenth Century*, September, 1889.

no important headway; and why, as a prominent member of one of the churches has recently remarked, the undogmatic sects reap the scantiest harvest, while the dogmatic churches still take the multitude. We are led to perceive how inherently hopeless and misdirected is the effort of those who try to do what Camus and Grégoire attempted to make the authors of the French Revolution do,—reorganize Christianity without believing in Christ. A form of belief from which the ultra-rational element has been eliminated is, it would appear, no longer capable of exercising the function of a religion.

Professor Huxley, some time ago, in a severe criticism of the "Religion of Humanity" advocated by the followers of Comte,¹ asserted, in accents which always come naturally to the individual when he looks at the drama of human life from his own standpoint, that he would as soon worship "a wilderness of apes" as the Positivist's rationalized conception of humanity. But the comparison with which he concluded, in which he referred to the considerable progress made by Mormonism as contrasted with Positivism, has its explanation when viewed in the light of the foregoing conclusions. Mormonism may be a monstrous form of belief, and one which is undoubtedly destined to be worsted in conflict with the forms of Christianity prevailing round it; yet it is seen that we cannot deny to it the characteristics of a religion. Although, on the other hand, the "Religion of Humanity" advocated by Comte may be, and is, a most exemplary set of principles, we perceive it to be without those characteristics. It is not, apparently, a religion at all. It is, like other forms of belief which do not provide a super-rational sanction for conduct, but which call themselves religions, incapable, from the nature of the conditions, of exercising the functions of a religion in the evolution of society.²

¹ *Nineteenth Century*, February, 1889.

² It is very interesting to notice how clearly G. H. Lewes, himself a distinguished adherent of Comte, perceived the inherent antagonism between religion and philosophy (the aim of the latter having always been to establish a rational sanction for conduct), and yet without realizing the significance of this antagonism in the process of social evolution the race is undergoing. Speaking of the attempt made in the past to establish a "religious philosophy," he remarks upon its

In the religious beliefs of mankind we have not simply a class of phenomena peculiar to the childhood of the race. We have therein the characteristic feature of our social evolution. These beliefs constitute, in short, the natural and inevitable complement of our reason; and so far from being threatened with eventual dissolution they are apparently destined to continue to grow with the growth and to develop with the development of society, while always preserving intact and unchangeable the one essential feature they all have in common in the ultra-rational sanction they provide for conduct. And lastly, as we understand how an ultra-rational sanction for the sacrifice of the interests of the individual to those of the social organism has been a feature common to all religions, we see, also, why the conception of sacrifice has occupied such a central place in nearly all beliefs, and why the tendency of religion has ever been to surround this principle with the most impressive and stupendous of sanctions.¹

innate impossibility because the doctrines of religion have always been held to have been *revealed*, and therefore beyond and inaccessible to reason. "So that," he says, "metaphysical problems, *the attempted solution of which by Reason constitutes Philosophy*, are solved by Faith, and yet the name of Philosophy is retained! But the very groundwork of Philosophy consists in reasoning, as the groundwork of Religion is Faith. There cannot, consequently, be a Religious Philosophy: it is a contradiction in terms. Philosophy may be occupied about the same problems as Religion; but it employs altogether different criteria, and depends on altogether different principles. Religion may, and should, call in Philosophy to its aid; but in so doing it assigns to Philosophy only the subordinate office of illustrating, reconciling, or applying its dogmas. This is not a Religious Philosophy, it is Religion *and* Philosophy, the latter stripped of its boasted prerogative of deciding for itself, and allowed only to employ itself in reconciling the decisions of Religion and of Reason" (History of Philosophy, Vol. I, p. 409). These are words written with true scientific insight. But a clearer perception of the fundamental problem of human evolution might have led the writer to see that the universal instinct of mankind which has recognized that the essential element in a religion is that its doctrines should be inaccessible to reason has its foundation in the very nature of the problem our social evolution presents; and that the error of Comte has been in assuming that a set of principles from which this element has been eliminated is capable of performing the functions of a religion.

¹ It is the expression of the antagonism between the interests of the individual and those of the social organism in process of evolution that we have in Kant's conception of the opposition between the inner and outer life, in Green's idea of the antagonism between the natural man and the spiritual man, and in Professor

To the consideration of the results flowing from this recognition of the real nature of the problem underlying our social development we have now to address ourselves. If we have, in the social system founded on a form of religious belief, the true organic growth with which science is concerned, we must, it would appear, be able then to discover some of the principles of development under the influence of which the social growth proceeds. If it is in the ethical system upon which a social type is founded that we have the seat of a vast series of vital phenomena unfolding themselves in obedience to law, then we must be able to investigate the phenomena of the past and to observe the tendencies of the current time with more profit than the study of either history or sociology has hitherto afforded. Let us see, therefore, with what prospect of success the biologist, who has carried the principles of his science so far into human society, may now address himself to the consideration of the history of that process of life in the midst of which we are living, and which we know under the name of Western civilization.

Caird's conception of the differences between self and not-self. We would not be precluded from accepting religion in Fichte's sense — as the realization of universal reason — *if we can understand universal reason involving the conception that the highest good is the furtherance of the evolutionary process the race is undergoing*. But once we have clearly grasped the nature of the characteristic problem human evolution presents, we see how absolutely individual rationalism has been precluded from attaining this position: it can only be reached as Kant contemplated, — “by a faith of reason which postulates a God to realize it” (i.e. the ultra-rational). Individuals repudiating ultra-rational sanctions may feel it possible to willingly participate in the cosmic process in progress; but conclusions often drawn from this involve an incomplete realization of the fact that the feelings which render it possible are — like our civilizations themselves — the direct product of ethical systems founded on ultra-rational sanctions. We live and move in the midst of the influences of these systems, and it is only by a mental effort of which only the strongest minds are capable that we can even imagine what our action, or the action of others, would be if they were nonexistent.

XIX

THE RELATIVITY OF GENIUS¹

Those who have read history with discrimination know the fallacy of those panegyrics and invectives which represent individuals as effecting great moral and intellectual revolutions, subverting established systems, and imprinting a new character on their age. The difference between one man and another is by no means so great as the superstitious crowd supposes. But the same feelings which in ancient Rome produced the apotheosis of a popular emperor, and in modern Rome the canonization of a devout prelate, lead men to cherish an illusion which furnishes them with something to adore. By a law of association, from the operation of which even minds the most strictly regulated by reason are not wholly exempt, misery disposes us to hatred, and happiness to love, although there may be no person to whom our misery or our happiness can be ascribed. The peevishness of an invalid vents itself even on those who alleviate his pain. The good humor of a man elated by success often displays itself towards enemies. In the same manner the feelings of pleasure and admiration, to which the contemplation of great events gives birth, make an object where they do not find it. Thus nations descend to the absurdities of Egyptian idolatry, and worship stocks and reptiles — Sacheverells and Wilkeses. They even fall prostrate before a deity to which they have themselves given the form which commands their veneration, and which, unless fashioned by them, would have remained a shapeless block. They persuade themselves that they are the creatures of what they have themselves created. For, in fact, it is the age that forms the man, not the man that forms the age. Great minds do indeed react on the society which has made them what they

¹ From the Essay on Dryden, by Thomas Babington Macaulay.

are, but they only pay with interest what they have received. We extol Bacon, and sneer at Aquinas. But if their situations had been changed, Bacon might have been the Angelical Doctor, the most subtle Aristotelian of the schools; the Dominican might have led forth the sciences from their house of bondage. If Luther had been born in the tenth century, he would have effected no reformation. If he had never been born at all, it is evident that the sixteenth century could not have elapsed without a great schism in the church. Voltaire, in the days of Louis XIV, would probably have been, like most of the literary men of that time, a zealous Jansenist, eminent among the defenders of efficacious grace, a bitter assailant of the lax morality of the Jesuits and the unreasonable decisions of the Sorbonne. If Pascal had entered on his literary career when intelligence was more general, and abuses at the same time more flagrant, when the church was polluted by the Iscariot Dubois, the court disgraced by the orgies of Canillac, and the nation sacrificed to the juggles of Law; if he had lived to see a dynasty of harlots, an empty treasury and a crowded harem, an army formidable only to those whom it should have protected, a priesthood just religious enough to be intolerant,—he might possibly, like every man of genius in France, have imbibed extravagant prejudices against monarchy and Christianity. The wit which blasted the sophisms of Escobar, the impassioned eloquence which defended the sisters of Port Royal, the intellectual hardihood which was not beaten down even by papal authority, might have raised him to the Patriarchate of the Philosophical Church. It was long disputed whether the honor of inventing the method of fluxions belonged to Newton or to Leibnitz. It is now generally allowed that these great men made the same discovery at the same time. Mathematical science, indeed, had then reached such a point that if neither of them had ever existed, the principle must inevitably have occurred to some person within a few years. So in our own time, the doctrine of rent now universally received by political economists was propounded almost at the same moment by two writers unconnected with each other. Preceding speculators had long been blundering round about it; and it could not possibly

have been missed much longer by the most heedless inquirer. We are inclined to think that with respect to every great addition which has been made to the stock of human knowledge the case has been similar ; that without Copernicus we should have been Copernicans, that without Columbus America would have been discovered, that without Locke we should have possessed a just theory of the origin of human ideas. Society indeed has its great men and its little men, as the earth has its mountains and its valleys. But the inequalities of intellect, like the inequalities of the surface of our globe, bear so small a proportion to the mass that in calculating its great revolutions they may safely be neglected. The sun illuminates the hills while it is still below the horizon ; and truth is discovered by the highest minds a little before it becomes manifest to the multitude. This is the extent of their superiority. They are the first to catch and reflect a light, which, without their assistance, must, in a short time, be visible to those who lie far beneath them.

XX

THE VIRTUES OF STUPIDITY¹

I fear you will laugh when I tell you what I conceive to be about the most essential mental quality for a free people whose liberty is to be progressive, permanent, and on a large scale: it is much stupidity. Not to begin by wounding any present susceptibilities, let me take the Roman character; for with one great exception, — I need not say to whom I allude, — they are the great political people of history. Now is not a certain dullness their most visible characteristic? What is the history of their speculative mind? A blank. What their literature? A copy. They have left not a single discovery in any abstract science, not a single perfect or well-formed work of high imagination. The Greeks, the perfection of human and accomplished genius, bequeathed to mankind the ideal forms of self-idolizing art, the Romans imitated and admired; the Greeks explained the laws of nature, the Romans wondered and despired; the Greeks invented a system of numerals second only to that now in use, the Romans counted to the end of their days with the clumsy apparatus which we still call by their name; the Greeks made a capital and scientific calendar, the Romans began their month when the Pontifex Maximus happened to spy out the new moon. Throughout Latin literature this is the perpetual puzzle: Why are we free and they slaves, we pretors and they barbers? Why do the stupid people always win and the clever people always lose? I need not say that in real sound stupidity the English are unrivaled; you'll hear more wit and better wit in an Irish street row than would keep Westminster Hall in humor for five weeks.

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¹ From *Letters on the French Coup d'État*, by Walter Bagehot.

In fact, what we opprobriously call "stupidity," though not an enlivening quality in common society, is nature's favorite resource for preserving steadiness of conduct and consistency of opinion; it enforces concentration: people who learn slowly learn only what they must. The best security for people doing their duty is, that they should not know anything else to do; the best security for fixedness of opinion is, that people should be incapable of comprehending what is to be said on the other side. These valuable truths are no discoveries of mine; they are familiar enough to people whose business it is to know them. Hear what a dounce and aged attorney says of your peculiarly promising barrister: "Sharp? Oh, yes! he's too sharp by half. He is not *safe*, not a minute, is n't that young man." I extend this, and advisedly maintain that nations, just as individuals, may be too clever to be practical and not dull enough to be free. . . .

And what I call a proper stupidity keeps a man from all the defects of his character; it chains the gifted possessor mainly to his old ideas, it takes him seven weeks to comprehend an atom of a new one; it keeps him from being led away by new theories, for there is nothing which bores him so much; it restrains him within his old pursuit, his well-known habits, his tried expedients, his verified conclusions, his traditional beliefs. He is not tempted to levity or impatience, for he does not see the joke and is thick-skinned to present evils. Inconsistency puts him out: "What I says is this here, as I was a-saying yesterday," is his notion of historical eloquence and habitual discretion. He is very slow indeed to be excited, — his passions, his feelings, and his affections are dull and tardy strong things, falling in a certain known direction, fixed on certain known objects, and for the most part acting in a moderate degree and at a sluggish pace. You always know where to find his mind. Now this is exactly what (in politics at least) you do not know about a Frenchman.

XXI

IMITATION¹

After these long preliminaries I must develop an important thesis, which has so far been obscure and involved. Science, as I have said, deals only with quantities and growths, or, in more general terms, with the resemblances and repetitions of phenomena.

This distinction, however, is really superfluous and superficial. Every advance in knowledge tends to strengthen the conviction that *all resemblance is due to repetition*. I think that this may be brought out in the three following propositions :

1. All resemblances which are to be observed in the chemical, or physical, or astronomical worlds (the atoms of a single body, the waves of a single ray of light, the concentric strata of attraction of which every heavenly body is a center) can be caused and explained solely by periodic and, for the most part, vibratory motions.

2. All resemblances of vital origin in the world of life result from hereditary transmission, from either intra- or extra-organic reproduction. It is through the relationship between cells and the relationship between species that all the different kinds of analogies and homologies, which comparative anatomy points out between species, and histology between corporeal elements, are at present explained.

3. All resemblances of *social origin* in society are the direct or indirect fruit of the various forms of imitation, — custom-imitation or fashion-imitation, sympathy-imitation or obedience-imitation, precept-imitation or education-imitation, naïve imitation, deliberate imitation, etc. In this lies the excellence of the contemporaneous method of explaining doctrines and institutions through their history. It is a method that is certain to come

¹ From *The Laws of Imitation*, by Gabriel Tarde. Translated by Elsie Clews Matthews (copyright, 1903, by Henry Holt & Co., New York).

into more general use. It is said that great geniuses, great inventors, are apt to cross each other's paths. But, in the first place, such coincidences are very rare, and when they do occur they are always due to the fact that both authors of the same invention have drawn independently from some common fund of instruction. This fund consists of a mass of ancient traditions and of experiences that are unorganized, or that have been more or less organized and imitatively transmitted through language, the great vehicle of all imitations.

In this connection we may observe that modern philologists relied so implicitly upon the foregoing proposition that they have concluded, through analogy, that Sanskrit, Latin, Greek, German, Russian, and other kindred tongues belong in reality to one family, and that it had a common progenitor in a language which was transmitted, with the exception of certain modifications, through tradition. Each modification was, in truth, an anonymous linguistic invention which was, in turn, perpetuated by imitation.

There is only one great class of universal resemblances which seem at first as if they could not have been produced by any form of repetition. This is the resemblance of the parts of infinite space whose juxtaposition and immobility are the very conditions of all motion whatsoever, whether vibratory, or reproductive, or propagative and subduing. But we must not pause over this apparent exception. It is enough to have mentioned it. Its discussion would lead us too far afield.

Turning aside from this anomaly, which may be illusory, let us maintain the truth of our general proposition, and note one of its direct consequences. If quantity signifies resemblance, if every resemblance proceeds from repetition, and if every repetition is a vibration (or any other periodic movement), a phenomenon of reproduction, or an act of imitation, it follows that, on the hypothesis that no motion is, or ever has been, vibratory, no function hereditary, no act or idea learned and copied, *there would be no such thing as quantity in the universe*, and the science of mathematics would be without any possible use or conceivable application. It also follows upon the inverse hypothesis, that if our physical, vital, and social spheres were to enlarge the range

of their vibratory, reproductive, and propagative activities, our field of calculation would be even more extensive and profound. This fact is apparent in our European societies where the extraordinary progress of fashion in all its forms, in dress, food, and housing, in wants and ideas, in institutions and arts, is making a single type of European based upon several hundreds of millions of examples. Is it not evident that it is this prodigious leveling which has from its very beginning made possible the birth and growth of statistical science and of what has been so well called *social physics*, political economy? Without fashion and custom, social quantities would not exist, there would be no values, no money, and, consequently, no science of wealth or finance. (How was it possible, then, for economists to dream of formulating theories of value in which the idea of imitation had no part?) But the application of number and measure to societies, which people are trying to make nowadays, cannot help being partial and tentative. In this matter the future has many surprises in store for us!

At this point we might develop the striking analogies, the equally instructive differences, and the mutual relations of the three main forms of universal repetition. We might also seek for the explanation of their majestically interwoven rhythms and symmetries; we might question whether the content of these forms resembled them or not, whether the active and underlying substance of these well-ordered phenomena shared in their sage uniformity, or whether it did not perhaps contrast with them in being essentially heterogeneous, like a people which gave no evidence in its military or administrative exterior of the tumultuous idiosyncrasies which constituted it and which set its machinery in motion.

This twofold subject would be too vast. In the first part of it, however, there are certain obvious analogies which we should note. In the first place, repetitions are also multiplications or self-spreading contagions. If a stone falls into the water, the first wave which it produces will repeat itself in circling out to the confines of its basin. If I light a match, the first undulation which I start in the ether will instantly spread throughout a vast

space. If one couple of termites or of phylloxeras are transported to a continent, they will ravish it within a few years. The pernicious erigeron of Canada, which has but quite recently been imported from Europe, flourishes already in every uncultivated field. The well-known laws of Malthus and Darwin on the tendency of the individuals of a species to increase in geometrical progression are true laws of human radiation through reproduction. In the same way, a local dialect that is spoken only by certain families gradually becomes, through imitation, a national idiom. In the beginning of societies, the art of chipping flint, of domesticating dogs, of making bows, and, later, of leavening bread, of working bronze, of extracting iron, etc., must have spread like a contagion, since every arrow, every flake, every morsel of bread, every thread of bronze, served both as model and copy. Nowadays the diffusion of all kinds of useful processes is brought about in the same way, except that our increasing density of population and our advance in civilization prodigiously accelerate their diffusion, just as velocity of sound is proportionate to density of medium. Every *social thing*, that is to say, every invention or discovery, tends to expand in its social environment, an environment which itself, I might add, tends to self-expansion, since it is essentially composed of like things, all of which have infinite ambitions.

This tendency, however, here as in external nature, often proves abortive through the competition of rival tendencies. But this fact is of little importance to theory; besides, it is metaphorical. Desire can no more be attributed to ideas than to vibrations or species, and the fact in question must be understood to mean that the scattered individual forces which are inherent in the innumerable beings composing the environment where these forms propagate themselves have taken a common direction. In this sense, this tendency towards expansion presupposes that the environment in question is homogeneous, a condition which seems to be well fulfilled by the ethereal or aërial medium of vibrations, much less so by the geographical and chemical medium of species, and infinitely less so by the social medium of ideas. But it is a mistake, I think, to express

this difference by saying that the social medium is more complex than the others. On the contrary, it is perhaps because it is numerically much more simple that it is farther from presenting the required homogeneity, since a homogeneity that is real on the surface, merely, suffices. Besides, as the agglomerations of human beings increase, the spread of ideas in a regular geometrical progression is more marked. Let us exaggerate this numerical increase to an extreme degree; let us suppose that the social sphere in which an idea can expand be composed not only of a group sufficiently numerous to give birth to the principal moral varieties of the human species, but also of thousands of uniform repetitions of these groups, so that the uniformity of these repetitions makes an apparent homogeneity, in spite of the internal complexity of each group. Have we not some reason for thinking that this is the kind of homogeneity which characterizes all the simple and apparently uniform realities which external nature presents to us? On this hypothesis, it is evident that the success of an idea, the more or less rapid rate at which it circulated on the day of its appearance, would supply the mathematical reason, in a way, of its further progression. Given this condition, producers of articles which satisfied prime needs and which were therefore destined for universal consumption would be able to foretell from the demand in a given year, at a certain price, what would be the demand in the following year, at the same price, provided no check, prohibitive or otherwise, intervened, or no superior article of the same class were discovered.

It has been said that the faculty of foresight is the criterion of science. Let us amend this to read, the faculty of *conditional foresight*. The botanist, for example, can foretell the form and color of the fruit which a flower will produce, provided it be not killed by drought, or provided a new and unexpected individual variety (a kind of secondary biological invention) do not develop. The physicist can state, at the moment a rifle shot is discharged, that it will be heard in a given number of seconds, at a given distance, provided nothing intercept the sound in its passage, or provided a louder sound, a discharge of cannon, for

example, be not heard during the given period. Now it is precisely on the same ground that the sociologist is, strictly speaking, a scientist. Given the centers, the approximate velocities, and the tendency to separate or concurrent motion of existing imitations, the sociologist is in a position to foretell the social conditions of ten or twenty years hence, provided no reform or political revolution occur to hinder this expansion and provided no rival centers arise meanwhile.

In this case, to be sure, the conditioning of events is highly probable, — more probable, perhaps, than in the others. But it is only a difference of degree. Besides, let us observe (as a matter that belongs to the philosophy and not to the science of history), that the successful discoveries and initiatives of the present vaguely determine the direction of those of the future. Moreover, the social forces of any real importance at any period are not composed of the necessarily feeble imitations that have radiated from recent inventions, but of the imitations of ancient inventions, radiations which are alike more intense and more widespread because they have had the necessary time in which to spread out and become established as habits, customs, or so-called physiological “race instincts.”¹ Our ignorance, therefore, of the unforeseen discoveries which will be made ten, twenty, or fifty years hence of the art-inspiring masterpieces which are to appear, of the battles and revolutions and deeds of violence which will be noised abroad, does not hinder us from almost accurately predicting, on the foregoing hypothesis, the depth and direction of the current of ideas and aspirations which our statesmen and our great generals, poets, and musicians will have to follow and render navigable, or stem and combat.

As examples in support of the geometrical progress of imitations, I might cite statistics of locomotive construction, or of the consumption of coffee, tobacco, etc., from the time they were first imported to the time they began to overstock the

¹ I must not be accused of the absurd idea of denying in all of this the influence of race upon social facts. But I think that on account of the number of its acquired characteristics, race is the outcome, and not the source, of these facts, and only in this hitherto ignored sense does it appear to me to come within the special province of the sociologist.

market.¹ I will mention a discovery which appears to be less favorable to my argument, — the discovery of America. This discovery was *imitated* in the sense that the first voyage from Europe to America, which was conceived of and executed by Columbus, came to be repeated more and more frequently by subsequent navigators. Every variation in these after voyages constituted a little discovery, which was grafted upon that of the great Genoese, and which, in turn, found imitators.

I will take advantage of this example to open a parenthesis. America might have been discovered two centuries earlier, or two centuries later, by an imaginative navigator. If two centuries earlier, if in 1292, the opening out of a new world had been offered to Philip the Fair, during his bouts with Rome and his bold attempt at secularization and administrative centralization, his ambition would have surely been excited, and the arrival of the Modern Age precipitated. Two centuries later, in 1692, America would unquestionably have been of greater value to the France of Henry IV than to Spain, and the latter country, not having had this rich prey to batten upon for two hundred years, would have been, at that time, less rich and prosperous. Who knows whether, under the first hypothesis, the Hundred Years' War might not have been precluded and, under the second, the empire of Charles V? At any rate, *the need of having colonies, a need which was both created and satisfied* by the discovery of Christopher Columbus, and one which has played such a leading rôle in the political life of Europe since the fifteenth century, would not have arisen until the seventeenth century, and, at the present time, South America would belong to France, and North America would not as yet amount to anything politically.

¹ The objection may be raised that increasing or diminishing series, as shown in the continuous statistics of a given number of years, are never regular, and are often upset by checks and reactions. Without dwelling upon this point, I may say that, in my opinion, these checks and reactions are always indicative of the interference of some new invention, which, in its turn, is spread abroad. I explain diminishing series in the same way, and in considering them we must be careful not to infer that at the end of a certain time, after it has been imitated more and more, a social thing tends to become *disimitated*. On the contrary, its tendency to invade the world continues unchanged, and if there be, not any disimitation, but any continuous falling off of imitation, its rivals are alone to blame.

What a difference to us! And to think that Christopher Columbus succeeded by a mere hair's breadth in his enterprise! But a truce to these speculations upon the *contingencies of the past*, although, in my opinion, they are as well founded and as significant as those of the future.

Here is another example, the most striking of all. The Roman Empire has perished, but, as has been well said, the conquest of Rome lives on forever. Through Christianity, Charlemagne extended it to the Germans; William the Conqueror extended it to the Anglo-Saxons; and Columbus to America. The Russians and the English are extending it to Asia and to Australia, and, prospectively, to the whole of Oceanica. Already Japan wishes for her turn to be invaded; it seems as if China alone would offer any serious resistance. But if we assume that China also will become assimilated, we can say that Athens and Rome, including Jerusalem, that is to say, the type of civilization formed by the group of their combined and coördinated initiatives and master thoughts, have conquered the entire world. All races and nationalities will have contributed to this unbounded contagious imitation of Greco-Roman civilization. The outcome would certainly have been different if Darius or Xerxes had conquered Greece and reduced it to a Persian province; or if Islam had triumphed over Charles Martel and invaded Europe; or if peaceful and industrious China had been belligerent during the past three thousand years, and had turned its spirit of invention towards the art of war as well as towards the arts of peace; or if, when America was discovered, gunpowder and printing had not yet been invented and Europeans had proved to be poorer fighters than the Aztecs or Incas. But chance determined that the type to which we belong should prevail over all other types of civilization, over all the clusters of radiant inventions which have flashed out spontaneously in different parts of the globe. Even if our own type had not prevailed, another type would certainly have triumphed in the long run, for one type was bound to become universal, *since all laid claim to universality*, — that is to say, since all tended to propagate themselves through imitation in a geometrical progression, like waves of light or sound, or like animal or vegetal species.

Let me point out a new order of analogies. Imitations are modified in passing from one race or nation to another, like vibrations or living types in passing from one environment to another. We see this, for example, in the transition of certain words, or religious myths, or military secrets, or literary forms, from the Hindus to the Germans, or from the Latins to the Gauls. In certain cases, the record of these modifications has been sufficiently full to suggest what their general and uniform trend has been. This is especially true of language; Grimm's, or, better still, Raynouard's, laws might well be called the laws of linguistic refraction.

According to Raynouard, when Latin words come under Spanish or Gallic influences they are consistently and characteristically transformed. According to Grimm's laws, a given consonant in German or English is equivalent to another given consonant in Sanskrit or Greek. This fact means, at bottom, that in passing from the primitive Aryan to the Teutonic or Hellenic or Hindu environments, the parent language has changed its consonants in a given order, substituting, in one case, an aspirate for a hard check, in another a hard check for an aspirate, etc.

If there were as many religions as there are languages (and there are hardly enough of these to give an adequate basis of comparison to certain general observations that might be formulated into linguistic laws), and, above all, if religious ideas were as numerous in every religion as words in a language, we might have laws of mythological refraction analogous to those of language. As it is, we can only follow a given myth like that of Ceres or Apollo, for example, through the modifications which have been stamped upon it by the genius of the different peoples who have adopted it. But there are so few myths to compare in this way that it is difficult to see any appreciable common traits in the turns which they have been given by the same people at different times, or anything more than a general family resemblance. And yet have we not much to observe in a study of the forms which the same religious ideas have taken on as they passed from the Vedas to the doctrines of Brahma or Zoroaster, from Moses to Christ or Mahomet, or as they circulated through

the dissentient Christian sects of the Greek, Roman, Anglican, and Gallic churches? Perhaps I should say that all that could be has already been observed along this line, and that we have only to draw upon this material.

Art critics have likewise had a confused premonition of the laws of artistic refraction, so to speak. These laws are peculiar to every people, in all epochs, and belong to every definite center of painting, music, architecture, and poetry, to Holland, Italy, France, etc. I will not press my point. But is it purely metaphorical and puerile to say that Theocritus is refracted in Vergil; Menander, in Terence; Plato, in Cicero; Euripides, in Racine?

Another analogy. Interferences occur between imitations, between social things, as well as between vibrations and between living types. When two waves, two physical *things* which are pretty much alike, and which have spread separately from two distinct centers, meet together in the same physical *being*, in the same particle of matter, the impetus of each is increased or neutralized, as its direction coincides with, or is diametrically opposed to, the direction of the other. In the first case, a new and complex wave sets in which is stronger than the others and which tends to propagate itself in turn; in the second, struggle and partial destruction follow, until one of the two rivals has the better of the other. In the same way we know what happens when two specific and sufficiently near types, two vital things, which have been reproduced independently of each other, generation after generation, come into mutual contact, not merely in one place (as in the case of animals which fight or devour one another, which would be a strictly physical encounter), but, more than that, in the same living being, in a germ cell fertilized by hybrid copulation, the only kind of encounter and interference which is really vital. In this case, either the offspring has greater vitality than its parents and, being at the same time more fruitful and prolific, transmits its distinctive characteristics to a more numerous progeny, a veritable discovery of life, or it is more puny, and gives birth to a few stunted descendants, in whom the divorce of the incompatible characters of their unnaturally united progenitors is hastened by the distinct triumph of one in

expelling the other. In the same way, when two beliefs or two desires, or a belief and a desire,—in short, when two social things (in the last analysis all social facts are beliefs or desires under the different names of dogmas, sentiments, laws, wants, customs, morals, etc.),—have for a certain time traveled their separate roads in the world by means of education or example, i.e. of imitation, they often end by coming into mutual contact. In order that their encounter and interference may be really psychological and social, coexistence in the same brain and participation in the same state of mind and heart is not only necessary but, in addition, one must present itself either in support of or in opposition to the other, either as a principle, of which the other is a corollary, or as an affirmative, of which the other is the negative. As for the beliefs and desires which seem neither to aid nor injure, neither to confirm nor contradict, each other, they cannot interfere with each other any more than two heterogeneous waves or two living types which are too distant from each other to unite. If they do appear to help or confirm each other, they combine by the very fact of this appearance or perception into a new practical or theoretic discovery, which is, in turn, bound to spread abroad, like its components, in contagious imitation. In this case, there has been a gain in the force of desire or belief, as in the corresponding cases of propitious physical or biological interference there was a gain in motor power or vitality. If, on the other hand, the interfering social things, theses or aims, dogmas or interests, convictions or passions, are mutually hurtful and antagonistic in the soul of an individual, or in that of a whole people, both the individual and the community will morally stagnate in doubt and indecision, until their soul is rent in two by some sudden or prolonged effort, and the less cherished belief or passion is sacrificed. Thus life chooses between two miscoupled types. A particularly important case and one which differs slightly from the preceding is that in which the two beliefs or desires, as well as the belief and the desire, which interfere happily or unhappily in the mind of an individual, are not experienced exclusively by him, but in part by him, and in part by one of his fellows. Here the interference

consists in the fact that the individual is aware of the confirmation or disproof of his own idea by the idea of others, and of the advantage or injury accruing to his own will from the will of others. From this, sympathy and agreement, or antipathy and war, result.¹

But all of this, I feel, needs to be elucidated. Let us distinguish between three hypotheses: the propitious interference of two beliefs, of two desires, and of a belief and a desire; and let us subdivide each one of these divisions as the subjects of interference are, or are not, found in the same individual. Later on, I shall have a word to say about unpropitious interferences.

1. If a conjecture which I have considered *fairly probable* comes into my mind while I am reading or remembering a fact which I think is *almost certain*, and if I suddenly perceive that the fact confirms the conjecture of which it is a consequence (i.e. the particular proposition which expresses the fact is included in the general proposition which expresses the conjecture), the conjecture immediately becomes much more probable in my eyes, and, at the same time, the fact appears to me to be an absolute certainty. So that there is a *gain in belief* all along the line. And

¹ The likeness which I have pointed out between heredity and imitation is verified even in the relation of each of these two forms of universal Repetition to its special form of Creation or Invention. As long as a society is young, vigorous, and progressive, inventions, new projects, and successful initiatives follow one another in rapid succession, and hasten social changes; then, when the inventive sap is exhausted, imitation still continues upon its course. India, China, and the late Roman Empire are examples in point. Now this is also true of the world of life. For example, M. Gaudry says in referring to the crinoidea (echinoderms) [*Enchaînement du monde animal* (secondary period)]: "They have lost that marvelous diversity of form which was one of the luxuries of the primary period; *no longer having the power of much self-mutation, they still retain that of producing individuals like themselves.*" But this is not always so. In the geological epochs, certain families or types of animals disappeared after their most brilliant period. This was the case with the ammonite, that wonderful fossil which flourished in such exuberant variety, during the secondary period, and which was, subsequently, annihilated forever. This was also the case with those brief and brilliant civilizations which, like ephemeral stars, glittered for a day in the sky of history, and were then suddenly extinguished. I refer to the Persia of Cyrus, to some of the Greek republics, to the south of France at the time of the war of the Albigenes, to the Italian republics, etc. When the creative power of these civilizations was worn out, not even the power to reproduce themselves remained. In fact, in most cases they would have been precluded from doing so by their own violent destruction.

the perception of this logical inclusion is a discovery. Newton discovered nothing more than this when, having brought his conjectured law of gravitation face to face with the calculation of the distance from the moon to the earth, he perceived that this fact confirmed his hypothesis. Let us suppose that, for a century long, an entire people is led by one of its teachers, by St. Thomas Aquinas, for example, or by Arnaud or Bossuet, to prove, or to think that it is proving, that a like agreement exists between its religious dogmas and the contemporaneous state of its sciences. Then we shall see such an overflowing river of faith as that which fructified the logical and inventive and war-like thirteenth and the Jansenist and Gallican seventeenth centuries. A harmony like this is nothing less than a discovery. The Summa, the catechism of Port Royal and the French clergy, and all the philosophic systems of the period, from Descartes himself to Leibnitz, are, in different degrees, its various expressions. Now let us somewhat modify our general proposition. Let us suppose that I am inclined to indorse a principle which the friend with whom I am talking absolutely refuses to accept. On the other hand, he tells me certain facts which he thinks are true, but which I take to be unverified. Subsequently, it seems to me, or rather, it flashes upon me, that if these facts were proved, they would fully confirm my principle. From now on, I also am inclined to credit them; but the only gain in belief has been one in regard to them, not in regard to my principle. Besides, this kind of discovery is incomplete; it will have no social effect until my friend either succeeds in imparting to me, through proofs, his belief, which is greater than mine, in the reality of the facts, or I myself can prove to him the truth of my principle. Here is precisely the advantage of a wide and free intellectual commerce.

2. The first mediæval merchant who was both vain and avaricious and who, in his unwillingness to forego either commercial wealth or social position, came to perceive the possibility of making avarice serve the ends of vanity, through the purchase of a title of nobility for himself and his family, thought he had made a fine discovery. And, as a matter of fact, he had numerous

imitators. Is it not true that after this unhopèd-for prospect both his passions redoubled in strength? Did not his avarice increase because gold had gained a new value in his eyes, and his vanity, because the object of his ambitious and hitherto-despaired-of dream had come within reach? To give, perhaps, a more modern illustration, the first lawyer who reversed the usual order of things by going into politics in order to make his fortune, introduced neither a bad idea nor an ineffective initiative. Let us take other instances. Suppose that I am in love, and that I also have a passion for rhyming. I turn my love to inspiring my metromania. My love quickens and my rhyming mania is intensified. How many poetical works have originated in this kind of an interference! Suppose, again, that I am a philanthropist, and that I like notoriety. In this case, I will strive to distinguish myself in order to do more good to my fellows, and I will strive to be useful to them in order to make a name for myself, etc. In history the same phenomenon occurs. After a long period of mutual opposition, Christian zeal combined with the contemporary passion for warlike expeditions and produced the outbreak of the Crusades. The invasion of Islam, the Jacqueries of '89 and of the years following, and all revolutions in which so many base passions are yoked to noble ones, are notable examples. But, happily, a still more contagious example was set in the beginnings of social life by the first man who said: "I am hungry and my neighbor is cold; I will offer him this garment, which is useless to me, in exchange for some of the food which he has in excess, and so *my* need of food will help satisfy *his* need of clothing, and *vice versa*. In this excellent and very simple, but, for that time, highly original, idea, industry, commerce, money, law, and all the arts originated. (I do not date the birth of society from this idea, for society undoubtedly existed before exchange. It began on the day when one man first copied another.)

Let us note that all new forms of professional work, that all new crafts, have arisen from analogous discoveries. These discoveries have generally been anonymous, but they are none the less positive and significant.

3. In historical importance, however, no mental interference equals that of a desire and a belief. But the numerous cases in which a conviction or opinion fastens itself upon an inclination, and affects it merely through inspiring another desire, must not be included in this category. After these cases have been eliminated, there still remains a considerable number in which the supervening idea acts directly upon the desire it has fallen in with and stimulated. Suppose, for example, that I would like to be an orator in the Chamber of Deputies, and I am straightway persuaded by the compliment of a friend that I have recently displayed true oratorical talent. This conviction enhances my ambition, and my ambition itself contributed to my conviction. For the same reason, there is no historical error, no atrocious or extravagant calumny or madness, which is not readily entertained by the very political passion which it helps to inflame. A belief will also stimulate a desire, now by making its object seem more attainable, now by stamping it with its approval. It also happens, to complete our analysis, that a man may realize that his own scheme will be helped by the belief of others, although he may have no share in their belief, nor they in his scheme. Such a realization is a *find* that many an impostor has exploited and still exploits.

This special kind of interferences and the important unnamed discoveries which result from them are to be counted among the chief forces which rule the world. What was the patriotism of Greek or Roman but a passion nourished by an illusion and *vice versa*? What was it but ambition, avarice, and love of fame nourished by an exaggerated belief in their own superiority, by the *anthropocentric* prejudice, the mistake of imagining that this little point in space, the earth, was the universe, and that on this little point Rome or Athens was alone worthy of the gods' consideration? What are, in large part, the fanaticism of the Arab, the proselytism of the Christian, and the propagandism of Jacobin and revolutionary doctrines but prodigious outgrowths of illusion-fed passions and passion-fed illusions? And these forces always arise from one person, from a single *center*, long in advance, to be sure, of the moment when they break forth

and take on historical importance. An enthusiast, eaten up with an impotent desire for conquest, or immortality, or human regeneration, chances upon some idea which opens an un hoped-for door to his aspirations. The idea may be that of the Resurrection or the Millennium, the dogma of popular sovereignty or some other formula of the *Social Contract*. He embraces the idea, it exalts him, and behold, a new apostle! In this way a political or religious contagion is spread abroad. In this way a whole people may be converted to Christianity, to Islam, and, to-morrow, perhaps, to socialism.

In the preceding paragraphs we have discussed only *interference-combinations*, interferences which result in discovery and gain and add to the two psychological quantities of desire and belief. But that long sequence of operations in moral arithmetic, which we call history, ushers in at least as many *interference-conflicts*. When these subjective antagonisms arise between the desires and beliefs of a single individual, and only in this case, there is an absolute diminution in the sum of those quantities. When they occur obscurely, here and there, in isolated individuals, they pass by unnoticed except by psychologists. Then we have (1) on the one side, the deceptions and gradual doubts of bold theorists and political prophets as they come to see facts giving the lie to their speculations and ridiculing their predictions, and the intellectual weakening of sincere and well-informed believers who perceive the contradiction between their science and their religion or philosophic systems; and, on the other side, the private and juristic and parliamentary discussions in which belief is rekindled instead of smothered. Again, we have (2) on the one side, the enforced and bitter inaction, the slow suicide of a man struggling between two incompatible aptitudes or inclinations, between scientific ardor and literary aspirations, between love and ambition, between pride and indolence, and, on the other side, those various rivalries and competitions which put every spring into action, — what we call in these days the struggle for existence. Finally, we have (3) on the one side, the malady of despair, a state of intense longing and intense self-doubt, the abyss of lovers and of those weary with

waiting, or the anguish of scruple and remorse, the feeling of a soul which thinks ill of the object of its desire, or well of the object of its aversion; and, on the other side, the irritating resistance which is made to the undertakings and eager passions of children and innovators by parents who are convinced of their danger and impracticability and by people of prudence and experience.

When these same phenomena (at bottom they are always the same) are enacted upon a large scale and multiplied by a large and powerful social current of imitation, they attain historical importance. Under other names, they become (1), on the one hand, the enervating skepticism of a people caught between two hostile churches or religions or between the contradictions of its priests and its scientists; on the other, the religious wars which are waged by one people against another merely because of differences in religious belief; (2) on the one hand, the failure and inertia of a people or class which has created for itself artificial passions contrary to its natural instincts (i.e. at bottom, to passions which also began by being artificial, by being adopted from foreign sources, but which are much older than the former passions), or desires inconsistent with its permanent interests, the desire for peace and comfort, for example, when a redoubling of military spirit was indispensable; on the other hand, the majority of external political wars; (3) on the one hand, civil warfare and oppositions, strictly speaking struggles between conservatives and revolutionists; on the other, the despair of a people or class which is gradually sinking back into the historical oblivion whence it had been drawn by some outburst of faith and enthusiasm, or the irritation and oppression of a society distressed by a conflict between its ancient maxims and traditions and its new aspirations, between Christianity and chivalry, for example, and industrialism and utilitarianism.

Now in the case of both individuals and societies, the doleful states of skepticism, inertia, and despair, and, still more, the violent and more painful states of dispute, combat, and opposition, are quick to push man on to their own undoing. Nevertheless, although man often succeeds in delivering himself for long

periods from the former, which imply the immediate weakening of his two master forces, he never overcomes the latter, or if he does free himself from them it is merely to fall into them again, since up to a certain point they bring with them momentary gains of belief and desire. Whence the interminable dissensions, rivalries, and contradictions which befall mankind and which each one can settle for himself only by adopting some logical system of thought and conduct. Whence the impossibility, or the seeming impossibility, of extirpating the wars and litigations from which everybody suffers, although the subjective strife of desires and opinions which afflicts some people generally ends for them in definite treaties of peace. Whence the endless rebirth of the eternal hydra-headed social question, a question which is not peculiar to our own time, but which belongs to all time, for it does not investigate into the outcome of the debilitating, but into that of the violent, states of desire and belief. In other words, it does not ask whether science or religion will, or should, ultimately prevail in the great majority of minds; whether desire for social order or rebellious outbursts of social envy, pride, and hatred will, or should, ultimately prove the stronger in human hearts; whether a positive and courageous resignation of old pretensions or, on the contrary, a new outburst of hope and self-confidence will help our sometime ruling classes to rid themselves to their honor of their present torpor; whether the old morality will have the right and the power to influence society again, or whether the society of the future will legitimately establish a code of honor and morality in its own likeness. The solution of these problems will not be long delayed, and it is not difficult, even at present, to foresee its nature. Whereas the problems which really constitute the social question are arduous and difficult. The problems are these: Is it a good or a bad thing for a complete intellectual unanimity to be established through the expulsion or the more or less tyrannical conversion of a dissenting minority, and will this ever come about? Is it a good or a bad thing for commercial or professional or personal competition between individuals, as well as political and military competition between societies, to come to be suppressed,

the one through the much-dreamed-of organization of labor, or, at least, through state socialism, and the other through a vast, universal confederation, or, at least, through a new European equilibrium, the first step towards the United States of Europe? Does the future hold this in store for us? Is it a good or a bad thing for a strong and free social authority, an absolutely sovereign authority, capable of grandiose things, as philanthropic and intelligent as possible, to arise, untrammelled by outside control or resistance, as a supreme imperial or constitutional power in the hands of a single party or a single people? Have we any such prospect in view?

This is the question, and stated thus it is a truly redoubtable one. Mankind, as well as the individual man, always moves in the direction of the greatest truth and power, of the greatest sum of conviction and confidence, in a word, of the greatest attainable belief; and we may question whether this *maximum* can be reached through the development of discussion, competition, and criticism, or, inversely, through their suppression and through the boundless opening out through imitation of a single expanding and, at the same time, compact thought or volition.

Additional References:

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C. THE SOCIAL AND ECONOMIC FACTORS

XXII

INQUIRY INTO THE INFLUENCE EXERCISED BY RELIGION, LITERATURE, AND GOVERNMENT¹

By applying to the history of man those methods of investigation which have been found successful in other branches of knowledge, and by rejecting all preconceived notions which would not bear the test of those methods, we have arrived at certain results, the heads of which it may now be convenient to recapitulate. We have seen that our actions, being solely the result of internal and external agencies, must be explicable by the laws of those agencies, — that is to say, by mental laws and by physical laws. We have also seen that mental laws are, in Europe, more powerful than physical laws; and that, in the progress of civilization, their superiority is constantly increasing, because advancing knowledge multiplies the resources of the mind, but leaves the old resources of nature stationary. On this account we have treated the mental laws as being the great regulators of progress; and we have looked at the physical laws as occupying a subordinate place, and as merely displaying themselves in occasional disturbances, the force and frequency of which have been long declining, and are now, on a large average, almost inoperative. Having by this means resolved the study of what may be called the dynamics of society into the study of the laws of the mind, we have subjected these last to a similar analysis; and we have found that they consist of two parts, namely, moral laws and intellectual laws. By comparing these two parts, we have clearly ascertained the vast superiority of the intellectual laws; and we have seen that as the progress

¹ From Buckle's *History of Civilization in England*, chap. v.

of civilization is marked by the triumph of the mental laws over the physical, just so is it marked by the triumph of the intellectual laws over the moral ones. This important inference rests on two distinct arguments. First, that moral truths being stationary, and intellectual truths being progressive, it is highly improbable that the progress of society should be due to moral knowledge, which for many centuries has remained the same, rather than to intellectual knowledge, which for many centuries has been incessantly advancing. The other argument consists in the fact, that the two greatest evils known to mankind have not been diminished by moral improvement, but have been, and still are, yielding to the influence of intellectual discoveries. From all this it evidently follows, that if we wish to ascertain the conditions which regulate the progress of modern civilization, we must seek them in the history of the amount and diffusion of intellectual knowledge; and we must consider physical phenomena and moral principles as causing, no doubt, great aberrations in short periods, but in long periods correcting and balancing themselves, and thus leaving the intellectual laws to act uncontrolled by these inferior and subordinate agents.

Such is the conclusion to which we have been led by successive analyses, and on which we now take our stand. The actions of individuals are greatly affected by their moral feelings and by their passions, but these being antagonistic to the passions and feelings of other individuals, are balanced by them; so that their effect is, in the great average of human affairs, nowhere to be seen; and the total actions of mankind, considered as a whole, are left to be regulated by the total knowledge of which mankind is possessed. And of the way in which individual feeling and individual caprice are thus absorbed and neutralized, we find a clear illustration in the facts already brought forward respecting the history of crime. For by those facts it is decisively proved that the amount of crime committed in a country is, year after year, reproduced with the most startling uniformity, not being in the least affected by those capricious and personal feelings to which human actions are too often referred. But if instead of examining the history of crime year by year we were to examine it month by month,

we should find less regularity ; and if we were to examine it hour by hour, we should find no regularity at all ; neither would its regularity be seen if, instead of the criminal records of a whole country, we only knew those of a single street, or of a single family. This is because the great social laws by which crime is governed can be perceived only after observing great numbers or long periods ; but in a small number and a short period the individual moral principle triumphs, and disturbs the operation of the larger and intellectual law. While, therefore, the moral feelings by which a man is urged to commit a crime, or to abstain from it, will produce an immense effect on the amount of his own crimes, they will produce no effect on the amount of crimes committed by the society to which he belongs, because, in the long run, they are sure to be neutralized by opposite moral feelings, which cause in other men an opposite conduct. Just in the same way we are all sensible that moral principles do affect nearly the whole of our actions ; but we have incontrovertible proof that they produce not the least effect on mankind in the aggregate, or even on men in very large masses, provided that we take the precaution of studying social phenomena for a period sufficiently long, and on a scale sufficiently great, to enable the superior laws to come into uncontrolled operation.

The totality of human actions being thus, from the highest point of view, governed by the totality of human knowledge, it might seem a simple matter to collect the evidence of the knowledge, and, by subjecting it to successive generalizations, ascertain the whole of the laws which regulate the progress of civilization. And that this will be eventually done I do not entertain the slightest doubt. But, unfortunately, history has been written by men so inadequate to the great task they have undertaken that few of the necessary materials have yet been brought together. Instead of telling us those things which alone have any value ; instead of giving us information respecting the progress of knowledge, and the way in which mankind has been affected by the diffusion of that knowledge, — instead of these things, the vast majority of historians fill their works with the most trifling and miserable details : personal anecdotes of kings and

courts ; interminable relations of what was said by one minister, and what was thought by another ; and, what is worse than all, long accounts of campaigns, battles, and sieges, very interesting to those engaged in them, but to us utterly useless, because they neither furnish new truths nor do they supply the means by which new truths may be discovered. This is the real impediment which now stops our advance. It is this want of judgment and this ignorance of what is most worthy of selection which deprive us of materials that ought long since to have been accumulated, arranged, and stored up for future use. In other great branches of knowledge observation has preceded discovery ; first the facts have been registered, and then their laws have been found. But in the study of the history of man, the important facts have been neglected, and the unimportant ones preserved. The consequence is, that whoever now attempts to generalize historical phenomena must collect the facts as well as conduct the generalization. He finds nothing ready to his hand. He must be the mason as well as the architect ; he must not only scheme the edifice but likewise excavate the quarry. The necessity of performing this double labor entails upon the philosopher such enormous drudgery that the limits of an entire life are unequal to the task ; and history, instead of being ripe, as it ought to be, for complete and exhaustive generalizations, is still in so crude and informal a state that not the most determined and protracted industry will enable any one to comprehend the really important actions of mankind, during even so short a period as two successive centuries.

On account of these things, I have long since abandoned my original scheme ; and I have reluctantly determined to write the history not of general civilization but of the civilization of a single people. While, however, by this means we curtail the field of inquiry, we unfortunately diminish the resources of which the inquiry is possessed. For although it is perfectly true that the totality of human actions, if considered in long periods, depends on the totality of human knowledge, it must be allowed that this great principle, when applied only to one country, loses something of its original value. The more we diminish our observations,

the greater becomes the uncertainty of the average; in other words, the greater the chance of the operation of the larger laws being troubled by the operation of the smaller. The interference of foreign governments; the influence exercised by the opinions, literature, and customs of a foreign people; their invasions, perhaps even their conquests; the forcible introduction by them of new religions, new laws, and new manners,—all these things are perturbations which, in a view of universal history, equalize each other, but which, in any one country, are apt to disturb the natural march, and thus render the movements of civilization more difficult to calculate. The manner in which I have endeavored to meet this difficulty will be presently stated; but what I first wish to point out are the reasons which have induced me to select the history of England as more important than any other, and therefore as the most worthy of being subjected to a complete and philosophic investigation.

Now it is evident that inasmuch as the great advantage of studying past events consists in the possibility of ascertaining the laws by which they were governed, the history of any people will become more valuable in proportion as their movements have been least disturbed by agencies not arising from themselves. Every foreign or external influence which is brought to bear upon a nation is an interference with its natural development, and therefore complicates the circumstances we seek to investigate. To simplify complications is, in all branches of knowledge, the first essential of success. This is very familiar to the cultivators of physical science, who are often able by a single experiment to discover a truth which innumerable observations had vainly searched; the reason being that by experimenting on phenomena we can disentangle them from their complications; and thus isolating them from the interference of unknown agencies, we leave them, as it were, to run their own course, and disclose the operation of their own law.

This, then, is the true standard by which we must measure the value of the history of any nation. The importance of the history of a country depends not upon the splendor of its exploits but upon the degree to which its actions are due to

causes springing out of itself. If, therefore, we could find some civilized people who had worked out their civilization entirely by themselves, who had escaped all foreign influence, and who had been neither benefited nor retarded by the personal peculiarities of their rulers, — the history of such a people would be of paramount importance, because it would present a condition of normal and inherent development ; it would show the laws of progress acting in a state of isolation ; it would be, in fact, an experiment ready made, and would possess all the value of that artificial contrivance to which natural science is so much indebted.

To find such a people as this is obviously impossible ; but the duty of the philosophic historian is to select for his special study the country in which the conditions have been most closely followed. Now it will be generally admitted not only by ourselves but by intelligent foreigners that in England, at all events, during the last three centuries this has been done more constantly and more successfully than in any other country. I say nothing of the number of our discoveries, the brilliancy of our literature, or the success of our arms. These are invidious topics ; and other nations may perhaps deny to us those superior merits which we are apt to exaggerate. But I take up this single position, that of all European countries England is the one where, during the longest period, the government has been most quiescent, and the people most active ; where popular freedom has been settled on the widest basis ; where each man is most able to say what he thinks, and do what he likes ; where every one can follow his own bent, and propagate his own opinions ; where, religious persecutions being little known, the play and flow of the human mind may be clearly seen, unchecked by those restraints to which it is elsewhere subjected ; where the profession of heresy is least dangerous, and the practice of dissent most common ; where hostile creeds flourish side by side, and rise and decay without disturbance, according to the wants of the people, unaffected by the wishes of the church, and uncontrolled by the authority of the state ; where all interests, and all classes, both spiritual and temporal, are most left to take care of themselves ; where that meddlesome doctrine called Protection was first

attacked, and where alone it has been destroyed ; and where, in a word, those dangerous extremes to which interference gives rise having been avoided, despotism and rebellion are equally rare, and concession being recognized as the groundwork of policy, the national progress has been least disturbed by the power of privileged classes, by the influence of particular sects, or by the violence of arbitrary rulers.

That these are the characteristics of English history is notorious ; to some men a matter of boast, to others of regret. And when to these circumstances we add that England, owing to its insular formation,¹ was until the middle of the last century rarely visited by foreigners, it becomes evident that in our progress as a people we have been less affected than any other by the two main sources of interference, namely, the authority of government and the influence of foreigners. In the sixteenth century it became a fashion among the English nobility to travel abroad ;² but it was by no means the fashion for foreign nobility to travel in England. In the seventeenth century the custom of traveling for amusement spread so much that among the rich and idle classes there were few Englishmen who did not, at least once in their life, cross the Channel ; while the same classes in other countries, partly because they were less wealthy, partly from an inveterate dislike to the sea, hardly ever entered our island unless compelled to do so on some particular business. The result was that in other countries, and particularly in France and Italy, the inhabitants of the great cities became gradually accustomed to foreigners, and, like all men, were imperceptibly influenced by

¹ Coleridge well says, "It is the chief of many blessings derived from the insular character and circumstances of our country that our social institutions have formed themselves out of our proper needs and interest" (Coleridge on the Constitution of the Church and State, 8vo, 1830, pp. 20, 21). The political consequences of this were much noticed at the time of the French Revolution. See *Mémoires de La Fayette*, Vol. I, p. 404, Bruxelles, 1837.

² In another place I shall collect the evidence of the rapidly increasing love of traveling in the sixteenth century ; but it is interesting to observe that during the latter half of the century there was first established the custom of appointing traveling tutors. Compare Barrington's *Observations on the Statutes*, p. 218, with a letter from Beza, written in 1598, in *Mémoires et Correspondance de Du Plessis Mornay*, Vol. IX, p. 81.

what they often saw. On the other hand, there were many of our cities in which none but Englishmen ever set their feet;¹ and inhabitants, even of the metropolis, might grow old without having once seen a single foreigner, except, perhaps, some dull and pompous ambassador taking his airing on the banks of the Thames. And although it is often said that after the restoration of Charles II our national character began to be greatly influenced by French example,² this, as I shall fully prove, was confined to that small and insignificant part of society which hung about the court; nor did it produce any marked effect upon the two most important classes,—the intellectual class and the industrious class. The movement may, indeed, be traced in the most worthless parts of our literature,—in the shameless productions of Buckingham, Dorset, Etherege, Killigrew, Mulgrave, Rochester, and Sedley. But neither then nor at a much later period were any of our great thinkers influenced by the intellect of France;³ on the contrary, we find in their ideas, and even in their style, a certain rough and native vigor which, though offensive to our more polished neighbors, has at least the merit

¹ In regard to the society of women, this was still more observable, even at a much later period; and when the Countess de Boufflers visited England, at the beginning of the reign of George III, "on lui faisoit un mérite de sa curiosité de voir l'Angleterre; car on remarquoit qu'elle étoit la seule dame françoise de qualité qui fût venue en voyageuse depuis deux cents ans: on ne comprenoit point, dans cette classe, les ambassadrices, ni la duchesse de Mazarin, qui y étoient venues par nécessité" (Dutens, *Mémoires d'un Voyageur*, Vol. I, p. 217). Compare *Mémoires de Madame de Genlis*, Vol. VIII, p. 241.

² Orme's *Life of Owen*, p. 288; Mahon's *History of England*, Vol. II, p. 211; and many other writers.

³ The only Englishman of genius who, during this period, was influenced by the French mind was Dryden; but this is chiefly apparent in his plays, the whole of which are now deservedly forgotten. His great works, and, above all, those wonderful satires, in which he distances every competitor except Juvenal, are thoroughly national, and as mere specimens of English are, if I may express my own judgment, to be ranked immediately after Shakespeare. In Dryden's writings there are unquestionably many Gallicisms of expression, but few Gallicisms of thought; and it is by these last that we must estimate the real amount of foreign influence. Sir Walter Scott goes so far as to say, "It will admit of question, whether any single French word has been naturalized upon the sole authority of Dryden" (*Scott's Life of Dryden*, 8vo, 1808, p. 523). Rather a bold assertion. As to the opinion of Fox, see Lord Holland's preface to Fox's *James II*, 4to, 1808, p. xxxii.

of being the indigenous product of our own country.¹ The origin and extent of that connection between the French and English intellects which subsequently arose is a subject of immense importance, but like most others of real value, it has been entirely neglected by historians. In the present work I shall attempt to supply this deficiency; in the meantime, I may say that although we have been, and still are, greatly indebted to the French for our improvement in taste, in refinement, in manners, and indeed in all the amenities of life, we have borrowed from them nothing absolutely essential, nothing by which the destinies of nations are permanently altered. On the other hand, the French have not only borrowed from us some very valuable political institutions but even the most important event in French history is due, in no small degree, to our influence. Their Revolution of 1789 was, as is well known, brought about, or, to speak more properly, was mainly instigated, by a few great men whose works and afterwards whose speeches roused the people to resistance; but what is less known, and nevertheless is certainly true, is that these eminent leaders learned in England that philosophy and those principles by which when transplanted into their own country such fearful and yet such salutary results were effected.

It will not, I hope, be supposed that by these remarks I mean to cast any reflection on the French: a great and admirable people; a people in many respects superior to ourselves; a people from whom we have still much to learn, and whose

¹ Another circumstance which has maintained the independence, and therefore increased the value, of our literature is that in no great country have literary men been so little connected with the government or rewarded by it. That this is the true policy, and that to protect literature is to injure it, are propositions for the proof of which I must refer to chap. xi of this volume (Buckle's *History of Civilization*) on the system of Louis XIV. In the meantime, I will quote the following words from a learned and, what is much better, a thoughtful writer: "Nor must he who will understand the English institutions leave out of view the character of the enduring works which had sprung from the salient energy of the English mind. Literature had been left to develop itself. William of Orange was foreign to it; Anne cared not for it; the first George knew no English; the second not much" (Bancroft's *History of the American Revolution*, Vol. II, p. 48). Compare Forster's *Life of Goldsmith*, 1854, Vol. I, pp. 93-96; Vol. II, p. 480.

deficiencies, such as they are, arise from the perpetual interference of a long line of arbitrary rulers. But looking at this matter historically, it is unquestionably true that we have worked out our civilization with little aid from them, while they have worked out theirs with great aid from us. At the same time, it must also be admitted that our governments have interfered less with us than their governments have interfered with them. And without in the least prejudging the question as to which is the greater country, it is solely on these grounds that I consider our history more important than theirs; and I select for especial study the progress of English civilization simply because, being less affected by agencies not arising from itself, we can the more clearly discern in it the normal march of society and the undisturbed operation of those great laws by which the fortunes of mankind are ultimately regulated.

After this comparison between the relative value of French and English history, it seems scarcely necessary to examine the claims which may be put forward for the history of other countries. Indeed, there are only two in whose favor anything can be said: I mean Germany, considered as a whole, and the United States of North America. As to the Germans, it is undoubtedly true that since the middle of the eighteenth century they have produced a greater number of profound thinkers than any other country, I might perhaps say than all other countries put together. But the objections which apply to the French are still more applicable to the Germans; for the protective principle has been, and still is, stronger in Germany than in France. Even the best of the German governments are constantly interfering with the people; never leaving them to themselves, always looking after their interests, and meddling in the commonest affairs of daily life. Besides this, the German literature, though now the first in Europe, owes its origin, as we shall hereafter see, to that great skeptical movement by which in France the Revolution was preceded. Before the middle of the eighteenth century the Germans, notwithstanding a few eminent names, such as Kepler and Leibnitz, had no literature of real value; and the first impetus which they received was caused by their contact with the

French intellect, and by the influence of those eminent Frenchmen who, in the reign of Frederick the Great, flocked to Berlin,¹ a city which has ever since been the headquarters of philosophy and science. From this there have resulted some very important circumstances, which I can here only briefly indicate. The German intellect, stimulated by the French into a sudden growth, has been irregularly developed, and thus hurried into an activity greater than the average civilization of the country requires. The consequence is, that there is no nation in Europe in which we find so wide an interval between the highest minds and the lowest minds. The German philosophers possess a learning and a reach of thought which places them at the head of the civilized world. The German people are more superstitious, more prejudiced, and, notwithstanding the care which the government takes of their education, more really ignorant and more unfit to guide themselves than are the inhabitants either of France or of England.² This separation and divergence of the two classes is

¹ The history of this remarkable though short-lived union between the French and German intellects will be traced in the next volume (i.e. Buckle's *History of Civilization*); but its first great effect in stimulating, or rather in creating, the German literature is noticed by one of the most learned of their own writers: "Denne inestheils war zu diesen Gegenständen immer die lateinische Sprache gebraucht, und die Muttersprache zu wenig cultivirt worden, anderntheils wurden diese Schriften auch meistens nur von Gelehrten, und zwar Universitätsgelehrten, für welche sie auch hauptsächlich bestimmt waren, gelesen. Gegen die Mitte des achtzehnten Jahrhunderts, als mehrere englische und französische Werke gelesen und übersetzt wurden, und durch die Vorliebe des Königs von Preussen Friedrichs II, der von Franzosen gebildet worden war, französische Gelehrte besonders geehrt und angestellt wurden, entstand ein Wettstreit der Deutschen, auch in dem schriftlichen Vortrage nicht zurück zu bleiben, und die Sprache hob sich bald zu einem hohen Grade von Vollkommenheit" (Tennemann, *Geschichte der Philosophie*, Vol. XI, pp. 286, 287).

² A popular view of the system of national education established in Germany will be found in Kay's *Social Condition and Education of the People of Europe*, Vol. II, pp. 1-344. But Mr. Kay, like most literary men, overrates the advantages of literary acquirements, and underrates that education of the faculties which neither books nor schools can impart to a people who are debarred from the exercise of civil and political rights. In the history of the protective spirit I shall return to this subject, in connection with France; and I shall examine it in regard to German civilization. In the meantime, I must be allowed to protest against the account Mr. Kay has given of the results of compulsory education: an agreeable picture, drawn by an amiable and intelligent writer, but of the

the natural result of that artificial stimulus which a century ago was administered to one of the classes, and which thus disturbed the normal proportions of society. Owing to this, the highest intellects have, in Germany, so outstripped the general progress of the nation that there is no sympathy between the two parties, nor are there at present any means by which they may be brought into contact. Their great authors address themselves not to their country but to each other. They are sure of a select and learned audience and they use what in reality is a learned language: they turn their mother tongue into a dialect, eloquent indeed, and very powerful, but so difficult, so subtle, and so full of complicated inversions that to their own lower classes it is utterly incomprehensible.¹ From this there have arisen some of

inaccuracy of which I possess decisive evidence. Two points only I will now refer to. First, the notorious fact, that the German people, notwithstanding their so-called education, are unfit to take any share in political matters, and have no aptitude for the practical and administrative parts of government. Second, the fact, equally notorious to those who have studied the subject, that there are more popular superstitions in Prussia, the most educated part of Germany, than there are in England; and that the tenacity with which men cling to them is greater in Prussia than in England. For illustration of the practical working, in individual cases, of compulsory education and of the hardship it causes, see a scandalous occurrence related in Laing's *Notes of a Traveller*, 8vo, 1842, p. 165, first series; and on the physical evils produced by German education, see Phillips on *Scrofula*, pp. 253, 254, London, 1846, where there is some useful evidence of the consequences of "that great German sin of overregulation."

¹ This is well stated by Mr. Laing, by far the ablest traveler who has published observations on European society: "German authors, both the philosophic and the poetic, address themselves to a public far more intellectual, and more highly cultivated, than our reading public. . . . In our literature, the most obscure and abstruse of metaphysical or philosophical writers *take the public mind in a far lower state*, simply cognizant of the meaning of language, and possessed of the ordinary reasoning power. . . . The social influence of German literature is consequently confined within a narrower circle. It has no influence on the mind of the lower or even of the middle classes in active life, who have not the opportunity or leisure to screw their faculties up to the pitch-note of their great writers. The reading public must devote much time to acquire the knowledge, tone of feeling, and of imagination necessary to follow the writing public. The social economist finds accordingly in Germany the most extraordinary dullness, inertness of mind, and ignorance, below a certain level, with the most extraordinary intellectual development, learning, and genius, at or above it" (*Laing's Notes of a Traveller*, first series, pp. 266, 267). The same acute observer says in a later work (*Notes*, third series, 8vo, 1852, p. 12): "The two classes speak and think in different

the most marked peculiarities of German literature. For being deprived of ordinary readers, it is cut off from the influence of ordinary prejudice ; and hence it has displayed a boldness of inquiry, a recklessness in the pursuit of truth, and a disregard of traditional opinions, which entitle it to the highest praise. But, on the other hand, this same circumstance has produced that absence of practical knowledge and that indifference to material and physical interests for which the German literature is justly censured. As a matter of course, all this has widened the original breach, and increased the distance which separates the great German thinkers from that dull and plodding class which, though it lies immediately beneath them, still remains uninfluenced by their knowledge and uncheered by the glow and fire of their genius.

In America, on the other hand, we see a civilization precisely the reverse of this. We see a country of which it has been truly said, that in no other are there so few men of great learning, and so few men of great ignorance.¹ In Germany the speculative classes and the practical classes are altogether disunited ; in America they are altogether fused. In Germany nearly every year brings forward new discoveries, new philosophies, new means by which the boundaries of knowledge are to be enlarged. In America such inquiries are almost entirely neglected ; since the time of Jonathan Edwards no great metaphysician has appeared ; little attention has been paid to physical science ; and, with the single exception of jurisprudence,² scarcely anything has

languages. The cultivated German language, the language of German literature, is not the language of the common man, nor even of the man far up in the middle ranks of society, — the farmer, tradesman, shopkeeper." See also pp. 351, 352, 354. It is singular that so clear and vigorous a thinker as Mr. Laing evidently is should have failed in detecting the cause of this peculiar phenomenon.

¹ "Je ne pense pas qu'il y ait de pays dans le monde où, proportion gardée avec la population, il se trouve aussi peu d'ignorants et moins de savants qu'en Amérique" (Tocqueville, *Démocratie en Amérique*, Vol. I, p. 91).

² The causes of this exception I shall endeavor to trace ; but it is interesting to notice that as early as 1775 Burke was struck by the partiality of the Americans for works on law. See Burke's Speech, in *Parliamentary History*, Vol. XVIII, p. 495 ; or in *Burke's Works*, Vol. I, p. 188. He says : "In no country perhaps in the world is the law so general a study. The profession itself is numerous and powerful ; and in most provinces it takes the lead. The greater number of

been done for those vast subjects on which the Germans are incessantly laboring. The stock of American knowledge is small, but it is spread through all classes ; the stock of German knowledge is immense, but it is confined to one class. Which of these two forms of civilization is the more advantageous is a question we are not now called upon to decide. It is enough for our present purpose that in Germany there is a serious failure in the diffusion of knowledge, and in America a no less serious one in its accumulation. And as civilization is regulated by the accumulation and diffusion of knowledge, it is evident that no country can even approach to a complete and perfect pattern, if cultivating one of these conditions to an excess it neglects the cultivation of the other. Indeed, from this want of balance and equilibrium between the two elements of civilization there have arisen in America and in Germany those great but opposite evils which, it is to be feared, will not be easily remedied, and which, until remedied, will certainly retard the progress of both countries, notwithstanding the temporary advantages which such one-sided energy does for the moment always procure.

I have very briefly, but I hope fairly, and certainly with no conscious partialty, endeavored to estimate the relative value of the history of the four leading countries of the world. As to the real greatness of the countries themselves I offer no opinion, because each considers itself to be the first. But unless the facts I have stated can be controverted, it certainly follows that the history of England is to the philosopher more valuable than any other, because he can more clearly see in it the accumulation and diffusion of knowledge going hand in hand, because that knowledge has been less influenced by foreign

the deputies sent to the Congress were lawyers. But all who read, — and most do read, — endeavor to obtain some smattering in that science. I have been told by an eminent bookseller that in no branch of his business, after tracts of popular devotion, were so many books as those on the law exported to the plantations. The colonists have now fallen into the way of printing them for their own use. I hear that they have sold nearly as many of Blackstone's Commentaries in America as in England." Of this state of society, the great works of Kent and Story were at a later period the natural result. On the respect at present felt for the legal profession, see Lyell's *Second Visit to the United States*, 1849, Vol. I, p. 45; and as to the judges, see Combe's *North America*, Vol. II, p. 329

and external agencies, and because it has been less interfered with, either for good or for evil, by those powerful but frequently incompetent men to whom the administration of public affairs is intrusted.

It is on account of these considerations, and not at all from those motives which are dignified with the name of patriotism, that I have determined to write the history of my own country in preference to that of any other, and to write it in a manner as complete and as exhaustive as the materials which are now extant will enable me to do. But inasmuch as the circumstances already stated render it impossible to discover the laws of society solely by studying the history of a single nation, I have drawn up the present introduction, in order to obviate some of the difficulties with which this great subject is surrounded. I have already attempted to mark out the limits of the subject considered as a whole, and fix the largest possible basis upon which it can rest. With this view I have looked at civilization as broken into two vast divisions: the European division, in which man is more powerful than nature; and the non-European division, in which nature is more powerful than man. This has led us to the conclusion that national progress, in connection with popular liberty, could have originated in no part of the world except in Europe; where, therefore, the rise of real civilization and the encroachments of the human mind upon the forces of nature are alone to be studied. The superiority of the mental laws over the physical being thus recognized as the groundwork of European history, the next step has been to resolve the mental laws into moral and intellectual, and prove the superior influence of the intellectual ones in accelerating the progress of man. These generalizations appear to me the essential preliminaries of history, considered as a science, and in order to connect them with the special history of England, we have now merely to ascertain the fundamental condition of intellectual progress, as until that is done, the annals of any people can only present an empirical succession of events, connected by such stray and casual links as are devised by different writers, according to their different principles. The remaining part of this introduction will therefore be

chiefly occupied in completing the scheme I have sketched, by investigating the history of various countries in reference to those intellectual peculiarities on which the history of our own country supplies no adequate information. Thus, for instance, in Germany the accumulation of knowledge has been far more rapid than in England; the laws of the accumulation of knowledge may on that account be most conveniently studied in German history, and then applied deductively to the history of England. In the same way, the Americans have diffused their knowledge much more completely than we have done; I therefore propose to explain some of the phenomena of English civilization by those laws of diffusion of which in American civilization the workings may be most clearly seen, and hence the discovery most easily made. Again, inasmuch as France is the most civilized country in which the protective spirit is very powerful, we may trace the occult tendencies of that spirit among ourselves, by studying its obvious tendencies among our neighbors. With this view I shall give an account of French history, in order to illustrate the protective principle, by showing the injury it has inflicted on a very able and enlightened people. And in an analysis of the French Revolution I shall point out how that great event was a reaction against the protective spirit, while, as the materials for the reaction were drawn from England, we shall also see in it the way in which the intellect of one country acts upon the intellect of another; and we shall arrive at some results respecting that interchange of ideas which is likely to become the most important regulator of European affairs. This will throw much light on the laws of international thought, and in connection with it two separate chapters will be devoted to a history of the protective spirit and an examination of its relative intensity in France and England. But the French as a people have since the beginning or middle of the seventeenth century been remarkably free from superstition; and notwithstanding the efforts of their government, they are very averse to ecclesiastical power, so that, although their history displays the protective principle in its political form, it supplies little evidence respecting its religious form, while in our own country the evidence is also scanty.

Hence my intention is to give a view of Spanish history, because in it we may trace the full results of that protection against error which the spiritual classes are always eager to afford. In Spain the church has from a very early period possessed more authority, and the clergy have been more influential both with the people and the government, than in any other country; it will therefore be convenient to study in Spain the laws of ecclesiastical development, and the manner in which that development affects the national interests. Another circumstance which operates on the intellectual progress of a nation is the method of investigation that its ablest men habitually employ. This method can only be one of two kinds: it must be either inductive or deductive. Each of these belongs to a different form of civilization and is always accompanied by a different style of thought, particularly in regard to religion and science. These differences are of such immense importance that until their laws are known we cannot be said to understand the real history of past events. Now the two extremes of the difference are, undoubtedly, Germany and the United States, the Germans being preëminently deductive, the Americans inductive. But Germany and America are in so many other respects diametrically opposed to each other that I have thought it expedient to study the operations of the deductive and inductive spirit in countries between which a closer analogy exists, because the greater the similarity between two nations, the more easily can we trace the consequences of any single divergence, and the more conspicuous do the laws of that divergence become. Such an opportunity occurs in the history of Scotland, as compared with that of England. Here we have two nations bordering on each other, speaking the same language, reading the same literature, and knit together by the same interests. And yet it is a truth, which seems to have escaped attention, but the proof of which I shall fully detail, that until the last thirty or forty years the Scotch intellect has been even more entirely deductive than the English intellect has been inductive. The inductive tendencies of the English mind and the almost superstitious reverence with which we cling to them have been noticed with regret by a few, and a very few, of our ablest

men.¹ On the other hand, in Scotland, particularly during the eighteenth century, the great thinkers, with hardly an exception, adopted the deductive method. Now the characteristic of deduction when applied to branches of knowledge not yet ripe for it is that it increases the number of hypotheses from which we reason downwards, and brings into disrepute the slow and patient ascent peculiar to inductive inquiry. This desire to grasp at truth by speculative and, as it were, foregone conclusions has often led the way to great discoveries; and no one, properly instructed, will deny its immense value. But when it is universally followed there is imminent danger lest the observation of mere empirical uniformities should be neglected, and lest thinking men should grow impatient at those small and proximate generalizations which, according to the inductive scheme, must invariably precede the larger and higher ones. Whenever this impatience actually occurs, there is produced serious mischief. For these lower generalizations form a neutral ground, which speculative minds and practical minds possess in common, and on which they meet. If this ground is cut away, the meeting is impossible. In such case, there arises among the scientific classes an undue contempt for inferences which the experience of the vulgar has drawn, but of which the laws seem inexplicable; while among the practical classes there arises a disregard of speculations so wide, so magnificent, and of which the intermediate and preliminary steps are hidden from their gaze. The results of this in Scotland are highly curious, and are, in several respects, similar to those which we find in Germany, since in both countries the intellectual classes have long been remarkable for their boldness of investigation and their freedom from prejudice, and the people at large equally remarkable for the number of their superstitions and the strength of their prejudices. In Scotland this is even more striking than in Germany, because the Scotch, owing to causes which have been little studied, are in practical

¹ Particularly Coleridge and Mr. John Mill. But with the greatest possible respect for Mr. Mill's profound work on Logic, I must venture to think that he has ascribed too much to the influence of Bacon in encouraging the inductive spirit, and too little to those other circumstances which gave rise to the Baconian philosophy, and to which that philosophy owes its success.

matters not only industrious and provident but singularly shrewd. This, however, in the higher departments of life has availed them nothing; and while there is no country which possesses a more original, inquisitive, and innovating literature than Scotland does, so also is there no country equally civilized in which so much of the spirit of the Middle Ages still lingers, in which so many absurdities are still believed, and in which it would be so easy to rouse into activity the old feelings of religious intolerance.

The divergence, and indeed the hostility, thus established between the practical and speculative classes is the most important fact in the history of Scotland, and is partly cause and partly effect of the predominance of the deductive method. For this descending scheme, being opposed to the ascending or inductive scheme, neglects those lower generalizations which are the only ones that both classes understand, and therefore the only ones where they sympathize with each other. The inductive method, as popularized by Bacon, gave great prominence to these lower or proximate truths; and this, though it has often made the intellectual classes in England too utilitarian, has at all events saved them from that state of isolation in which they would otherwise have remained. But in Scotland the isolation has been almost complete, because the deductive method has been almost universal. In order that I may not leave the subject entirely without illustration, I will notice very briefly the principal instances that occurred during those three generations in which Scotch literature reached its highest excellence.

During this period, which comprises nearly a century, the tendency was so unmistakable as to form a striking phenomenon in the annals of the human mind. The first great symptom was a movement begun by Simson, professor at the University of Glasgow, and continued by Stewart, professor at the University of Edinburgh. These able men made strenuous efforts to revive the pure Greek geometry and depreciate the algebraic or symbolical analysis.¹ Hence there rose among them, and among

¹ Simson was appointed in 1711; and even before he began to lecture, he drew up "a translation of the three first books of L'Hopital's Conic Sections, in which geometrical demonstrations are substituted for the algebraical of the original,

their disciples, a love of the most refined methods of solution and a contempt for those easier but less elegant ones which we owe to algebra.¹ Here we clearly see the isolating and esoteric character of a scheme which despises what ordinary understandings can quickly master, and which had rather proceed from the ideal to the tangible than mount from the tangible to the ideal. Just at the same time the same spirit was displayed in another branch of inquiry by Hutcheson, who, though an Irishman by birth, was educated in the University of Glasgow, and was professor there. In his celebrated moral and æsthetic researches he, in the place of inductive reasoning from palpable facts, substituted deductive reasoning from impalpable principles, ignoring the immediate and practical suggestions of the senses, and believing that by a hypothetical assumption of certain laws he could descend upon the facts instead of rising from the facts in order to learn the laws.² His philosophy exercised immense influence

according to Mr. Simson's early taste on this subject" (Trail's *Life and Writings of Robert Simson*, 4to, 1812, p. 4). This was probably the rudiment of his work on *Conic Sections*, published in 1735 (Montucla, *Histoire des Mathématiques*, Vol. III, p. 12). On the difference between the ancient and modern schemes, there are some ingenious, though perhaps scarcely tenable, remarks in Dugald Stewart's *Philosophy of the Mind*, Vol. II, pp. 354 *seq.* and p. 380. See also Comte, *Philosophie Positive*, Vol. I, pp. 383-395. Matthew Stewart, the mathematical professor at Edinburgh, was the father of Dugald. See, respecting him and his crusade against the modern analysis, Bower's *History of the University of Edinburgh*, Vol. II, pp. 357-360; Vol. III, p. 249; and a strange passage in *First Report of the British Association*, p. 59.

¹ One of Simson's great reasons for recommending the old analysis was that it was "more elegant" than the comparatively modern practice of introducing algebraic calculations into geometry. See Trail's *Simson*, 4to, 1812, pp. 27, 67; a valuable work, which Lord Brougham, in his hasty life of Simson, calls "a very learned and exceedingly ill-written, indeed hardly readable," book (Brougham's *Men of Letters and Science*, Vol. I, 8vo, 1845, p. 482). Dr. Trail's style is clearer and his sentences are less involved than Lord Brougham's; and he had moreover the great advantage of understanding the subject upon which he wrote.

² Sir James Mackintosh (*Dissertation on Ethical Philosophy*, p. 208) says of Hutcheson, "To him may also be ascribed that proneness to multiply ultimate and original principles in human nature, which characterized the Scottish school till the second extinction of passion for metaphysical speculation in Scotland." There is an able view of Hutcheson's philosophy in Cousin, *Histoire de la Philosophie*, I. série, Vol. IV, pp. 31 *seq.*, written with clearness and eloquence, but perhaps overpraising Hutcheson.

among metaphysicians ;¹ and his method of working downwards from the abstract to the concrete was adopted by another and a still greater Scotchman, the illustrious Adam Smith. How Smith favored the deductive form of investigation is apparent in his Theory of Moral Sentiments, likewise in his Essay on Language,² and even in his fragment on the History of Astronomy, in which he, from general considerations, undertook to prove what the march of astronomical discovery must have been instead of first ascertaining what it had been.³ The Wealth of Nations, again, is entirely deductive, since in it Smith generalizes the laws of wealth, not from the phenomena of wealth, nor from statistical statements, but from the phenomena of selfishness ; thus making a deductive application of one set of mental principles to the whole set of economical facts.⁴ The illustrations

¹ On its influence, see a letter from Mackintosh to Parr, in *Memoirs of Mackintosh*, by his son, Vol. I, p. 334. Compare *Letters from Warburton to Hurd*, pp. 37, 82.

² Which is added to his *Theory of Moral Sentiments*, edit. 1822, 2 volumes. Compare a letter which Smith wrote in 1763 on the origin of language (in *Nichols' Literary Illustrations of the Eighteenth Century*, Vol. III, pp. 515, 516), which exhibits, on a small scale, the same treatment, as distinguished from a generalization of the facts which are supplied by a comprehensive comparison of different languages. Dr. Arnold speaks slightly of such investigations. He says, "Attempts to explain the phenomena of language *a priori* seem to me unwise" (*Arnold's Miscellaneous Works*, p. 385). This would lead into a discussion too long for a note ; but it appears to me that these *a priori* inferences are to the philologist what hypotheses are to the inductive natural philosopher ; and if this be the case, they are extremely important, because no really fruitful experiment ever can be made unless it is preceded by a judicious hypothesis. In the absence of such an hypothesis, men may grope in the dark for centuries, accumulating facts without obtaining knowledge.

³ See, for instance, his attempt to prove, from general reasonings concerning the human mind, that there was a necessary relation in regard to the order in which men promulgated the system of concentric spheres and that of eccentric spheres and epicycles. See *History of Astronomy*, in *Smith's Philosophical Essays*, 4to, 1795, pp. 31, 36, which it may be convenient to compare with *Whewell's Philosophy of the Inductive Sciences*, 1847, Vol. II, pp. 53, 60, 61. This striking fragment of Adam Smith's is probably little read now, but it is warmly praised by one of the greatest living philosophers, M. A. Comte, in his *Philosophie Positive*, Vol. VI, p. 319.

⁴ The two writers who have inquired most carefully into the method which political economists ought to follow are Mr. John Mill (*Essays on Unsettled Questions of Political Economy*, 1844, pp. 120-164) and Mr. Rae (*New Principles of Political Economy*, 1834, pp. 328-351). Mr. Rae, in his ingenious work, objects

with which his great book abounds are no part of the real argument: they are subsequent to the conception; and if they were all omitted, the work, though less interesting, and perhaps less influential, would in a scientific point of view be equally valuable. To give another instance, the works of Hume, his metaphysical essays alone excepted, are all deductive; his profound economical inquiries are essentially *a priori*, and might have been written without any acquaintance with those details of trade and finance from which, according to the inductive scheme, they should have been generalized.¹ Thus, too, in his *Natural History of Religion*, he endeavored simply by reflection and independently of evidence to institute a purely speculative investigation into the origin of religious opinions.² In the same way, in his *History of England*,

to Adam Smith that he transgressed the rules of the Baconian philosophy, and thus prevented his inferences from being as valuable as they would have been if he had treated his subject inductively. But Mr. Mill, with great force of reasoning, has proved that the deductive plan is the only one by which political economy can be raised to a science. He says (p. 143) that political economy is "essentially an *abstract* science, and its method is the method *a priori*"; and at p. 146, that the *a posteriori* method is "altogether inefficacious." To this I may add, that the modern theory of rent, which is now the corner stone of political economy, was got at, not by generalizing economical facts but by reasoning downwards after the manner of geometers. Indeed, those who oppose the theory of rent always do so on the ground that it is contradicted by facts; and then, with complete ignorance of the philosophy of method, they infer that therefore the theory is wrong. See, for instance, Jones on the *Distribution of Wealth*, 8vo, 1831: a book containing some interesting facts, but vitiated by this capital defect of method. See also *Journal of Statistical Society*, Vol. I, p. 317; Vol. VI, p. 322, where it is said that economical theories should be generalized from statistical facts. Compare Vol. XVII, p. 116; Vol. XVIII, p. 101.

¹ A striking instance has lately come to light of the sagacity with which Hume employed this method. See *Burton's Life and Correspondence of Hume*, Vol. II, p. 486, where we find that immediately after Hume had read the *Wealth of Nations*, he detected Smith's error concerning rent being an element of price; so that it now appears that Hume was the first to make this great discovery as far as the idea is concerned, though Ricardo has the merit of proving it.

² The historical facts he introduces are merely illustrations, as any one will see who will read *The Natural History of Religion*, in Hume's *Philos. Works*, Vol. IV, pp. 435-513, Edinburgh, 1826. I may mention that there is a considerable similarity between the views advocated in this remarkable essay and the religious stages of Comte's *Philosophie Positive*; for Hume's early form of polytheism is evidently the same as M. Comte's fetichism, from which both these writers believe that monotheism subsequently arose as a later and more refined abstraction. That this was the course adopted by the human mind is highly probable and is

instead of first collecting the evidence and then drawing inferences from it, he began by assuming that the relations between the people and the government must have followed a certain order, and he either neglected or distorted the facts by which this supposition was contradicted.¹ These different writers, though varying in their principles and in the subjects they studied, were all agreed as to their method; that is to say, they were all agreed to investigate truth rather by descent than by ascent. The immense social importance of this peculiarity I shall examine in the next volume, where I shall endeavor to ascertain how it affected the national civilization and caused some curious contrasts with the opposite and more empirical character of English literature. In the meantime, and merely to state what will be hereafter proved, I may add that the deductive method was not only employed by those eminent Scotchmen I have mentioned but was carried into the speculative History of Civil Society by Ferguson; into the study of legislation by Mill; into the study of jurisprudence by Mackintosh; into geology by Hutton; into thermotics by Black and Leslie; into physiology by Hunter, by Alexander Walker, and by Charles Bell; into pathology by Cullen; into therapeutics by Brown and Currie.

confirmed by the learned researches of Mr. Grote. See his *History of Greece*, Vol. I, pp. 462, 497; Vol. V, p. 22. The opposite and more popular opinion, of monotheism preceding idolatry, was held by most of the great earlier writers, and is defended by many moderns, and among others by Dr. Whewell (*Bridgewater Treatise*, p. 256), who expresses himself with considerable confidence: see also *Letters from Warburton to Hurd*, p. 239. Compare Thirlwall's *History of Greece*, Vol. I, p. 183, London, 1835, with the "einige Funken des Monotheismus" of Kant, *Kritik der reinen Vernunft*, in Kant's *Werke*, Vol. II, p. 455.

¹ That is to say, he treated historical facts as merely illustrative of certain general principles, which he believed could be proved without the facts; so that, as M. Schlosser (*History of the Eighteenth Century*, Vol. II, p. 76) well says, "History with Hume was only a subordinate pursuit, only a means by which he might introduce his philosophy," etc. Considering how little is known of the principles which govern social and political changes, there can be no doubt that Hume was premature in the application of this method; but it is absurd to call the method dishonest, since the object of his history was not to *prove* conclusions but to *illustrate* them; and he therefore thought himself justified in selecting the illustrations. I am simply stating his views, without at all defending them; indeed, I believe that in this respect he was seriously in the wrong.

This is an outline of the plan I purpose to follow in the present introduction, and by means of which I hope to arrive at some results of permanent value. For by studying different principles in those countries where they have been most developed, the laws of the principles will be more easily unfolded than if we had studied them in countries where they are very obscure. And inasmuch as in England civilization has followed a course more orderly and less disturbed than in any other country, it becomes the more necessary, in writing its history, to use some resources like those which I have suggested. What makes the history of England so eminently valuable is, that nowhere else has the national progress been so little interfered with, either for good or for evil. But the mere fact that our civilization has by this means been preserved in a more natural and healthy state renders it incumbent on us to study the diseases to which it is liable, by observing those other countries where social disease is more rife. The security and the durability of civilization must depend on the regularity with which its elements are combined, and on the harmony with which they work. If any one element is too active, the whole composition will be in danger. Hence it is, that although the laws of the composition of the elements will be best ascertained wherever we can find the composition most complete, we must, nevertheless, search for the laws of each separate element wherever we can find the element itself most active. While, therefore, I have selected the history of England as that in which the harmony of the different principles has been longest maintained, I have precisely on that account thought it advisable to study each principle separately in the country where it has been most powerful, and where by its inordinate development the equilibrium of the entire structure has been disturbed.

By adopting these precautions we shall be able to remove many of the difficulties which still beset the study of history. Before, however, entering that wide field which now lies in our way, it will be well to clear up some preliminary points which I have not yet noticed, and the discussion of which may obviate certain objections that might otherwise be raised. The subjects

to which I allude are Religion, Literature, and Government : three topics of vast importance, and which, in the opinion of many persons, are the prime movers of human affairs. That this opinion is altogether erroneous will be amply proved in the present work ; but as the opinion is widely spread and is very plausible, it is necessary that we should at once come to some understanding respecting it, and inquire into the real nature of that influence which these three great powers do actually exercise over the progress of civilization.

Now, in the first place, it is evident that if a people were left entirely to themselves, their religion, their literature, and their government would be not the causes of their civilization but the effects of it. Out of a certain condition of society certain results naturally follow. Those results may, no doubt, be tampered with by some external agency ; but if that is not done, it is impossible that a highly civilized people, accustomed to reason and to doubt, should ever embrace a religion of which the glaring absurdities set reason and doubt at defiance. There are many instances of nations changing their religion, but there is no instance of a progressive country voluntarily adopting a retrogressive religion ; neither is there any example of a declining country ameliorating its religion. It is of course true that a good religion is favorable to civilization, and a bad one unfavorable to it. Unless, however, there is some interference from without, no people will ever discover that their religion is bad until their reason tells them so ; but if their reason is inactive, and their knowledge stationary, the discovery will never be made. A country that continues in its old ignorance will always remain in its old religion. Surely nothing can be plainer than this. A very ignorant people will, by virtue of their ignorance, incline towards a religion full of marvels ; a religion which boasts of innumerable gods, and which ascribes every occurrence to the immediate authority of those gods. On the other hand, a people whose knowledge makes them better judges of evidence, and who are accustomed to that most difficult task, the practice of doubting, will require a religion less marvelous, less obtrusive ; one that taxes their credulity less heavily. But will you therefore say that the

badness of the first religion causes the ignorance, and that the goodness of the second religion causes the knowledge? Will you say that when one event precedes another the one which comes first is the effect, and the one which follows afterwards is the cause? This is not the way in which men reason on the ordinary affairs of life; and it is difficult to see why they should reason thus respecting the history of past events.

The truth is that the religious opinions which prevail in any period are among the symptoms by which that period is marked. When the opinions are deeply rooted they do, no doubt, influence the conduct of men; but before they can be deeply rooted, some intellectual change must first have taken place. We may as well expect that the seed should quicken in the barren rock as that a mild and philosophic religion should be established among ignorant and ferocious savages. Of this innumerable experiments have been made, and always with the same result. Men of excellent intentions and full of a fervent though mistaken zeal have been, and still are, attempting to propagate their own religion among the inhabitants of barbarous countries. By strenuous and unrelenting activity, and frequently by promises, and even by actual gifts, they have in many cases persuaded savage communities to make a profession of the Christian religion. But whoever will compare the triumphant reports of the missionaries with the long chain of evidence supplied by competent travelers will soon find that such profession is only nominal, and that these ignorant tribes have adopted, indeed, the ceremonies of the new religion, but have by no means adopted the religion itself. They receive the externals, but there they stop. They may baptize their children; they may take the sacrament; they may flock to the church. All this they may do, and yet be as far removed from the spirit of Christianity as when they bowed the knee before their former idols. The rites and forms of a religion lie on the surface; they are at once seen, they are quickly learned, easily copied by those who are unable to penetrate to that which lies beneath. It is this deeper and inward change which alone is durable; and this the savage can never experience while he is sunk in an ignorance that levels

him with the brutes by which he is surrounded. Remove the ignorance, and then the religion may enter. This is the only course by which ultimate benefit can be effected. After a careful study of the history and condition of barbarous nations, I do most confidently assert that there is no well-attested case of any people being permanently converted to Christianity, except in those very few instances where missionaries, being men of knowledge as well as men of piety, have familiarized the savage with habits of thought, and by thus stimulating his intellect have prepared him for the reception of those religious principles which, without such stimulus, he could never have understood.¹

It is in this way that, looking at things upon a large scale, the religion of mankind is the effect of their improvement, not the cause of it. But looking at things upon a small scale, or taking what is called a practical view of some short and special period, circumstances will occasionally occur which disturb this general order, and apparently reverse the natural process. And this, as in all such cases, can only arise from the peculiarities of individual men, who, moved by the minor laws which regulate individual actions, are able, by their genius or their energy, to interfere with the operation of those greater laws which regulate large societies. Owing to circumstances still unknown, there appear from time to time great thinkers, who, devoting their lives to a

¹ A writer of great authority has made some remarks on this which are worth attending to: "Ce fut alors que les Jésuites pénétrèrent dans la Chine pour y prêcher l'évangile. Ils ne tardèrent pas à s'apercevoir qu'un des moyens les plus efficaces pour s'y maintenir, en attendant le moment que le ciel avoit marqué pour éclairer ce vaste empire, étoit d'étaler des connoissances astronomiques" (Montucla, *Histoire des Mathématiques*, Vol. I, p. 468; and see Vol. II, pp. 586, 587). Cuvier delicately hints at the same conclusion. He says of Emery: "Il se souvenait que l'époque où le christianisme a fait le plus de conquêtes, et où ses ministres ont obtenu le plus de respect, est celle, où ils portaient chez les peuples convertis les lumières des lettres, en même temps que les vérités de la religion, et où ils formaient à la fois dans les nations l'ordre le plus éminent et le plus éclairé" (Cuvier, *Éloges Historiques*, Vol. III, p. 170). Even Southey (*History of Brazil*, Vol. II, p. 378) says: "Missionaries have always complained of the fickleness of their converts; and they must always complain of it, till they discover that some degree of civilization must precede conversion, or at least accompany it." And see, to the same effect, Halkett's *Notes on the North American Indians*, pp. 352, 353, and Combe's *North America*, Vol. I, p. 250; Vol. II, p. 353.

single purpose, are able to anticipate the progress of mankind, and to produce a religion or a philosophy by which important effects are eventually brought about. But if we look into history we shall clearly see that although the origin of a new opinion may be thus due to a single man, the result which the new opinion produces will depend on the condition of the people among whom it is propagated. If either a religion or a philosophy is too much in advance of a nation, it can do no present service, but must bide its time, until the minds of men are ripe for its reception. Of this innumerable instances will occur to most readers. Every science and every creed has had its martyrs: men exposed to obloquy, or even to death, because they knew more than their contemporaries, and because society was not sufficiently advanced to receive the truths which they communicated. According to the ordinary course of affairs, a few generations pass away, and then there comes a period when these very truths are looked upon as commonplace facts; and a little later there comes another period, in which they are declared to be necessary, and even the dullest intellects wonder how they could ever have been denied. This is what happens when the human mind is allowed to have fair play, and to exercise itself with tolerable freedom in the accumulation and diffusion of knowledge. If, however, by violent, and therefore by artificial, means, this same society is prevented from exercising its intellect, then the truths, however important they may be, can never be received. For why should certain truths be rejected in one age and acknowledged in another? The truths remain the same; their ultimate recognition must therefore be due to a change in the society which now accepts what it had before despised. Indeed, history is full of evidence of the utter inefficiency even of the noblest principles, when they are promulgated among a very ignorant nation. Thus it was that the doctrine of One God, taught to the Hebrews of old, remained for many centuries altogether inoperative. The people to whom it was addressed had not yet emerged from barbarism; they were, therefore, unable to raise their minds to so elevated a conception. Like all other barbarians, they also craved a religion

which would feed their credulity with incessant wonders ; and which, instead of abstracting the Deity to a single essence, would multiply their gods until they covered every field, and swarmed in every forest. This is the idolatry which is the natural fruit of ignorance ; and this it is to which the Hebrews were perpetually recurring. Notwithstanding the most severe and unremitting punishments, they at every opportunity abandoned that pure theism which their minds were too backward to receive, and relapsed into superstitions which they could more easily understand, — into the worship of the golden calf, and the adoration of the brazen serpent. Now, and in this age of the world, they have long ceased to do these things. And why ? Not because their religious feelings are more easily aroused, or their religious fears more often excited. So far from this, they are dissevered from their old associations ; they have lost forever those scenes by which men might well have been moved. They are no longer influenced by those causes which inspired emotions, sometimes of terror, sometimes of gratitude. They no longer witness the pillar of cloud by day, or the pillar of fire by night ; they no longer see the Law being given from Sinai, nor do they hear the thunder rolling from Horeb. In the presence of these great appeals, they remained idolaters in their hearts, and whenever an opportunity occurred they became idolaters in their practice ; and this they did because they were in that state of barbarism of which idolatry is the natural product. To what possible circumstance can their subsequent change be ascribed, except to the simple fact that the Hebrews, like all other people, as they advanced in civilization, began to abstract and refine their religion, and, despising the old worship of many gods, thus by slow degrees elevated their minds to that steady perception of One Great Cause, which, at an earlier period, it had been vainly attempted to impress upon them ?

Thus intimate is the connection between the opinions of a people and their knowledge, and thus necessary is it that, so far as nations are concerned, intellectual activity should precede religious improvement. If we require further illustrations of this important truth, we shall find them in the events which occurred

in Europe soon after the promulgation of Christianity. The Romans were, with rare exceptions, an ignorant and barbarous race, — ferocious, dissolute, and cruel. For such a people, polytheism was the natural creed ; and we read accordingly that they practiced an idolatry which a few great thinkers, and only a few, ventured to despise. The Christian religion, falling among these men, found them unable to appreciate its sublime and admirable doctrines. And when, a little later, Europe was overrun by fresh immigrations, the invaders, who were even more barbarous than the Romans, brought with them those superstitions which were suited to their actual condition. It was upon the materials arising from these two sources that Christianity was now called to do her work. The result is most remarkable. For after the new religion seemed to have carried all before it, and had received the homage of the best part of Europe, it was soon found that nothing had been really effected. It was soon found that society was in that early stage in which superstition is inevitable, and in which men if they do not have it in one form will have it in another. It was in vain that Christianity taught a simple doctrine, and enjoined a simple worship. The minds of men were too backward for so great a step, and required more complicated forms and a more complicated belief. What followed is well known to the students of ecclesiastical history. The superstition of Europe, instead of being diminished, was only turned into a fresh channel. The new religion was corrupted by the old follies. The adoration of idols was succeeded by the adoration of saints ; the worship of the Virgin was substituted for the worship of Cybele ;¹ pagan ceremonies were established in Christian churches ; not only the mummeries of idolatry but likewise its doctrines were quickly added, and were incorporated and worked into the spirit of the new religion, until after the lapse of a few generations, Christianity exhibited so grotesque and hideous a

¹ This is curiously illustrated by the fact that the 25th of March, which is now called Lady-day, in honor of the Virgin Mary, was in pagan times called *Hilaria*, and was dedicated to Cybele, the mother of the gods. Compare Blunt's *Vestiges of Ancient Manners*, 8vo, 1823, pp. 51-55, with Hampson's *Medii Ævi Kalendarium*, 8vo, 1841, Vol. I, pp. 56, 177.

form that its best features were lost, and the lineaments of its earlier loveliness altogether destroyed.¹

After some centuries were passed, Christianity slowly emerged from these corruptions, many of which, however, even the most civilized countries have not yet been able to throw off.² Indeed, it was found impossible to effect even the beginning of a reform until the European intellect was in some degree roused from its lethargy. The knowledge of men, gradually advancing, made them indignant at superstitions which they had formerly admired. The way in which their indignation increased, until in the sixteenth century it broke out into that great event which is well called the Reformation, forms one of the most interesting subjects in modern history. But for our present purpose it is enough to keep in mind the memorable and important fact that for centuries after Christianity was the established religion of Europe, it failed to bear its natural fruit, because its lot was cast among a people whose ignorance compelled them to be superstitious, and who, on account of their superstition, defaced a system which in its original purity they were unable to receive.³

Indeed, in every page of history we meet with fresh evidence of the little effect religious doctrines can produce upon a people

¹ On this interesting subject, the two best English books are Middleton's *Letter from Rome*, and Priestley's *History of the Corruptions of Christianity*; the former work being chiefly valuable for ritual corruptions, the latter work for doctrinal ones. Blunt's *Vestiges of Ancient Manners* is also worth reading, but is very inferior to the two treatises just named, and is conceived in a much narrower spirit.

² The large amount of paganism which still exists in every Christian sect forms an argument against an ingenious distinction which M. Bunsen has made between the change of a religion and that of a language, alterations in a religion being, as he supposes, always more abrupt than those in a language (Bunsen's *Egypt*, Vol. I, pp. 358, 359).

³ It was necessary, says M. Maury, that the church "se rapprochât davantage de l'esprit grossier, inculte, ignorant du barbare" (Maury, *Légendes Pieuses du Moyen Age*, p. 101). An exactly similar process has taken place in India, where the Puranas are to the Vedas what the works of the fathers are to the New Testament. Compare Elphinstone's *History of India*, pp. 87, 88, 98; Wilson's *Preface to the Vishnu Purana*, p. vii; and *Transactions of Bombay Society*, Vol. I, p. 205. So that, as M. Max Müller well expresses it, the Puranas are "a secondary formation of Indian mythology" (Müller on the Languages of India, in *Reports of the British Association for 1847*, p. 324).

unless preceded by intellectual culture. The influence exercised by Protestantism, as compared with Catholicism, affords an interesting example of this. The Catholic religion bears to the Protestant religion exactly the same relation that the Dark Ages bear to the sixteenth century. In the Dark Ages men were credulous and ignorant ; they therefore produced a religion which required great belief and little knowledge. In the sixteenth century their credulity and ignorance, though still considerable, were rapidly diminishing, and it was found necessary to organize a religion suited to their altered circumstances ; a religion more favorable to free inquiry ; a religion less full of miracles, saints, legends, and idols ; a religion of which the ceremonies were less frequent and less burdensome ; a religion which should discourage penance, fasting, confession, celibacy, and those other mortifications which had long been universal. All this was done by the establishment of Protestantism : a mode of worship which, being thus suited to the age, made, as is well known, speedy progress. If this great movement had been allowed to proceed without interruption, it would in the course of a few generations have overthrown the old superstition and established in its place a simpler and less troublesome creed, the rapidity with which this was done being of course proportioned to the intellectual activity of the different countries. But unfortunately the European governments, who are always meddling in matters with which they have no concern, thought it their duty to protect the religious interests of the people ; and making common cause with the Catholic clergy, they, in many instances, forcibly stopped the heresy and thus arrested the natural development of the age. This interference was, in nearly all cases, well intended, and is solely to be ascribed to the ignorance of rulers respecting the proper limits of their functions ; but the evils caused by this ignorance it would be difficult to exaggerate. During almost a hundred and fifty years Europe was afflicted by religious wars, religious massacres, and religious persecutions ; not one of which would have arisen if the great truth had been recognized that the state has no concern with the opinions of men, and no right to interfere, even in the slightest degree, with the form of worship

which they may choose to adopt. This principle was, however, formerly unknown, or at all events unheeded, and it was not until the middle of the seventeenth century that the great religious contests were brought to a final close, and the different countries settled down into their public creeds, which in the essential points have never since been permanently altered; no nation having for more than two hundred years made war upon another on account of its religion, and all the great Catholic countries having, during the same period, remained Catholic, all the great Protestant ones remained Protestant.

From this it has arisen that in several of the European countries the religious development has not followed its natural order, but has been artificially forced into an unnatural one. According to the natural order, the most civilized countries should all be Protestants, and the most uncivilized ones Catholics. In the average of instances this is actually the case, so that many persons have been led into the singular error of ascribing all modern enlightenment to the influence of Protestantism, overlooking the important fact that until the enlightenment had begun Protestantism was never required. But although in the ordinary course of affairs the advance of the Reformation would have been the measure and the symptom of that advance of knowledge by which it was preceded, still in many cases the authority of the government and of the church acted as disturbing causes, and frustrated the natural progress of religious improvement. And after the treaty of Westphalia had fixed the political relations of Europe, the love of theological strife so greatly subsided that men no longer thought it worth their while to raise a religious revolution, and to risk their lives in an attempt to overturn the creed of the state. At the same time, governments, not being themselves particularly fond of revolutions, have encouraged this stationary condition and very naturally and, as it appears to me, very wisely have made no alteration, but have left the national establishments as they found them; that is to say, the Protestant ones Protestant, the Catholic ones Catholic. Hence it is that the national religion professed by any country at the present moment is no decisive criterion of the present civilization of the country, because the circumstances which fixed the religion occurred long

since, and the religion remains endowed and established by the mere continuance of an impetus which was formerly given.

Thus far as to the origin of the ecclesiastical establishments of Europe. But in their practical consequences we see some results which are highly instructive. For many countries owing their national creed not to their own proper antecedents but to the authority of powerful individuals, it will be invariably found that in such countries the creed does not produce the effects which might have been expected from it, and which, according to its terms, it ought to produce. Thus, for instance, the Catholic religion is more superstitious and more intolerant than the Protestant, but it by no means follows that those countries which profess the former creed must be more superstitious and more intolerant than those which profess the latter. So far from this, the French are not only quite as free from those odious qualities as are the most civilized Protestants but they are more free from them than some Protestant nations, as the Scotch and the Swedes. Of the highly educated class I am not here speaking, but of the clergy and of the people generally, it must be admitted that in Scotland there is more bigotry, more superstition, and a more thorough contempt for the religion of others than there is in France. And in Sweden, which is one of the oldest Protestant countries in Europe,¹ there is not occasionally but habitually an intolerance and a spirit of persecution which would be discreditable to a Catholic country, but which is doubly disgraceful when proceeding from a people who profess to base their religion on the right of private judgment.²

¹ The doctrines of Luther were first preached in Sweden in 1519; and in 1527 the principles of the Reformation were formally adopted in an assembly of the States at Westeraas, which enabled Gustavus Vasa to seize the property of the church. See Geijer's *History of the Swedes*, Part I, pp. 110, 118, 119; Mosheim's *Ecclesiastical History*, Vol. II, p. 22; Crichton and Wheaton's *History of Scandinavia*, Vol. I, pp. 399, 400. The apostasy proceeded so favorably that De Thou (*Histoire Univ.*, Vol. XIII, p. 312) says, in 1598, "Il y avoit déjà si long-tems que ce culte étoit établi en Suède, qu'il étoit comme impossible de trouver, soit parmi le peuple, soit parmi les seigneurs, quelqu'un qui se souvint d'avoir vu dans ce royaume l'exercice public de la religion catholique."

² On the state of things in 1838, see some curious, and indeed shameful, details in Laing's *Sweden*, 8vo, London, 1839. Mr. Laing, though himself a Protestant, truly says, that in Protestant Sweden there "is inquisition law, working in the hands of a Lutheran state-church, as strongly as in Spain or Portugal in the hands

These things show, what it would be easy to prove by a wider induction, that when from special or, as they are called, accidental causes, any people profess a religion more advanced than themselves, it will not produce its legitimate effect.¹ The superiority of Protestantism over Catholicism consists in its diminution of superstition and intolerance, and in the check which it gives to ecclesiastical power. But the experience of Europe teaches us that when the superior religion is fixed among an inferior people, its superiority is no longer seen. The Scotch and the Swedes — and to them might be added some of the Swiss cantons — are less civilized than the French, and are therefore more superstitious. This being the case, it avails them little that they have a religion better than the French. It avails them little that, owing to circumstances which have long since passed away, they, three centuries ago, adopted a creed to which the force of habit and the influence of tradition now oblige them to cling. Whoever has traveled in Scotland with sufficient attention to observe the ideas and opinions of the people, and whoever will look into

of a Roman Catholic church" (Laing's Sweden, p. 324). In the seventeenth century it was ordered by the Swedish church, and the order was confirmed by government, that "if any Swedish subject change his religion, he shall be banished the kingdom, and lose all right of inheritance, both for himself and his descendants. . . . If any bring into the country teachers of another religion, he shall be fined and banished" (Burton's Diary, 8vo, 1828, Vol. II, p. 387). To this may be added, that it was not till 1781 that Roman Catholics were allowed to exercise their religion in Sweden. See Crichton's History of Scandinavia, Vol. II, p. 320, Edinburgh, 1838. See also, on this intolerant spirit, Whitelocke's Journal of the Swedish Embassy, Vol. I, pp. 164, 412; Vol. II, p. 212.

¹ We see a good instance of this in the case of the Abyssinians, who have professed Christianity for centuries; but as no pains were taken to cultivate their intellect, they found the religion too pure for them; they therefore corrupted it, and down to the present moment they have not made the slightest progress. The accounts given by Bruce of them are well known; and a traveler, who visited them in 1839, says: "Nothing can be more corrupt than the nominal Christianity of this unhappy nation. It is mixed up with Judaism, Mohammedanism, and idolatry, and is a mass of rites and superstitions which cannot mend the heart" (Kraff's "Journal at Ankobar," in *Journal of Geographical Society*, Vol. X, p. 488); see also Vol. XIV, p. 13; and for a similar state of things in America, see the account of the Quiché Indians, in Stephens' Central America, Vol. II, pp. 191, 192. Compare Squier's Central America, Vol. I, pp. 322, 323, with Halkett's North American Indians, pp. 29, 212, 268. For further confirmation of this view, in another part of the world, see Tuckey's Expedition to the Zaire, pp. 79, 80, 165.

Scotch theology, and read the history of the Scotch Kirk and the proceedings of the Scotch Assemblies and Consistories, will see how little the country has benefited by its religion, and how wide an interval there is between its intolerant spirit and the natural tendencies of the Protestant Reformation. On the other hand, whoever will subject France to a similar examination will see an illiberal religion accompanied by liberal views, and a creed full of superstitions professed by a people among whom superstition is comparatively rare.

The simple fact is, that the French have a religion worse than themselves, the Scotch have a religion better than themselves. The liberality of France is as ill suited to Catholicism as the bigotry of Scotland is ill suited to Protestantism. In these, as in all similar cases, the characteristics of the creed are overpowered by the characteristics of the people, and the national faith is in the most important points altogether inoperative, because it does not harmonize with the civilization of the country in which it is established. How idle, then, it is to ascribe the civilization to the creed, and how worse than foolish are the attempts of government to protect a religion which, if suited to the people, will need no protection, and, if unsuited to them, will work no good !

If the reader has seized the spirit of the preceding arguments, he will hardly require that I should analyze with equal minuteness the second disturbing cause, namely, Literature. It is evident that what has already been said respecting the religion of a people is in a great measure applicable to their literature. Literature,¹ when it is in a healthy and unforced state, is simply the form in which the knowledge of a country is registered, the mold in which it is cast. In this, as in the other cases we have considered, individual men may of course take great steps, and rise to a great height above the level of their age. But if they rise beyond a certain point, their present usefulness is impaired ; if they rise

¹ I use the word "literature" not as opposed to science but in its larger sense, including everything which is written, — "taking the term 'literature,' in its primary sense of an application of letters to the records of facts or opinions" (Mure's *History of the Literature of Greece*, Vol. IV, p. 50).

still higher, it is destroyed.¹ When the interval between the intellectual classes and the practical classes is too great the former will possess no influence, the latter will reap no benefit. This is what occurred in the ancient world when the distance between the ignorant idolatry of the people and the refined systems of philosophers was altogether impassable;² and this is the principal reason why the Greeks and Romans were unable to retain the civilization which they for a short time possessed. Precisely the same process is at the present moment going on in Germany, where the most valuable part of literature forms an esoteric system, which, having nothing in common with the nation itself, produces no effect on the national civilization. The truth is, that although Europe has received great benefit from its literature, this is owing not to what the literature has originated but to what it has preserved. Knowledge must be acquired before it can be written, and the only use of books is to serve as a storehouse in which the treasures of the intellect are safely kept and where they may be conveniently found. Literature in itself is but a trifling matter, and is merely valuable as being the armory in which the

¹ Compare Tocqueville, *Démocratie en Amérique*, Vol. II, p. 130, with some admirable remarks on the Sophists in Grote's *History of Greece*, Vol. VIII, p. 481. Sir W. Hamilton, whose learning respecting the history of opinions is well known, says, "Precisely in proportion as an author is in advance of his age, is it likely that his works will be neglected" (Hamilton's *Discussions on Philosophy*, p. 186). Thus too, in regard to the fine arts, Sir Joshua Reynolds (Fourth Discourse, in *Works*, Vol. I, p. 363) says, "Present time and future may be considered as rivals; and he who solicits the one must expect to be discountenanced by the other."

² Hence the intellectually exclusive and, as M. Neander well terms it, "aristocratic spirit of antiquity" (Neander's *History of the Church*, Vol. I, pp. 40, 97; Vol. II, p. 31). This is constantly overlooked by writers who use the word "democracy" loosely, forgetting that, in the same age, democracies of politics may be very common, while democracies of thought are very rare. For proof of the universal prevalence formerly of this esoteric and aristocratic spirit, see the following passages: Ritter's *History of Ancient Philosophy*, Vol. I, p. 338; Vol. III, pp. 9, 17; Tennemann, *Geschichte der Philosophie*, Vol. II, pp. 200, 205, 220; Beausobre, *Histoire Critique de Manichéisme*, Vol. II, p. 41; Matter, *Histoire du Gnosticisme*, Vol. I, p. 13; Vol. II, pp. 83, 370; Sprengel, *Histoire de la Médecine*, Vol. I, p. 250; Grote's *History of Greece*, Vol. I, p. 561; Vol. IV, p. 544; Thirlwall's *History of Greece*, Vol. II, p. 150; Vol. VI, p. 95; Warburton's *Works*, Vol. VII, 4to, 1788, pp. 962, 972; Sharpe's *History of Egypt*, Vol. II, p. 174; Cudworth's *Intellect. System*, Vol. II, pp. 114, 365, 443; Vol. III, p. 20.

weapons of the human mind are laid up, and from which, when required, they can be quickly drawn. But he would be a sorry reasoner, who, on that account, should propose to sacrifice the end that he might obtain the means, who should hope to defend the armory by giving up the weapons, and who should destroy the treasure in order to improve the magazine in which the treasure is kept.

Yet this is what many persons are apt to do. From literary men, in particular, we hear too much of the necessity of protecting and rewarding literature, and we hear too little of the necessity of that freedom and boldness, in the absence of which the most splendid literature is altogether worthless. Indeed, there is a general tendency not to exaggerate the advantages of knowledge — for that is impossible — but to misunderstand what that is in which knowledge really consists. Real knowledge, the knowledge on which all civilization is based, solely consists in an acquaintance with the relations which things and ideas bear to each other and to themselves; in other words, in an acquaintance with physical and mental laws. If the time should ever come when all these laws are known, the circle of human knowledge will then be complete, and, in the interim, the value of literature depends upon the extent to which it communicates either a knowledge of the laws or the materials by which the laws may be discovered. The business of education is to accelerate this great movement and thus increase the fitness and aptitude of men by increasing the resources which they possess. Towards this purpose literature, so far as it is auxiliary, is highly useful. But to look upon an acquaintance with literature as one of the objects of education is to mistake the order of events and to make the end subservient to the means. It is because this is done that we often find what are called highly educated men, the progress of whose knowledge has been actually retarded by the activity of their education. We often find them burdened by prejudices which their reading, instead of dissipating, has rendered more inveterate.¹ For

¹ Locke has noticed this "learned ignorance," for which many men are remarkable. See a fine passage in the *Essay on Human Understanding*, Book III, chap. x, in *Locke's Works*, Vol. II, p. 27, and similar remarks in his *Conduct of the Understanding*, Vol. II, pp. 350, 364, 365, and in his *Thoughts on Education*, Vol. VIII, pp. 84-87. If this profound writer were now alive, what a war he

literature, being the depository of the thoughts of mankind, is full not only of wisdom but also of absurdities. The benefit, therefore, which is derived from literature will depend not so much upon the literature itself as upon the skill with which it is studied and the judgment with which it is selected. These are the preliminary conditions of success, and if they are not obeyed, the number and the value of the books in a country become a matter quite unimportant. Even in an advanced stage of civilization there is always a tendency to prefer those parts of literature which favor ancient prejudices rather than those which oppose them, and in cases where this tendency is very strong, the only effect of great learning will be to supply the materials which may corroborate old errors and confirm old superstitions. In our time such instances are not uncommon, and we frequently meet with men whose erudition ministers to their ignorance, and who the more they read the less they know. There have been states of society in which this disposition was so general that literature has done far more harm than good. Thus, for example, in the whole period, from the sixth to the tenth centuries, there were not in all Europe more than three or four men who dared to think for themselves, and even they were obliged to veil their meaning in obscure and mystical language. The remaining part of society was during these four centuries sunk in the most degrading ignorance. Under these circumstances the few who were able to read confined their studies to works which encouraged and strengthened their superstition, such as the legends of the saints and the homilies of the fathers. From these sources they drew those lying and impudent fables of which the theology of that time is principally composed.¹ These miserable stories were widely circulated, and were valued as solid and important truths. The more the literature was read the more the stories were believed ;

would wage against our great universities and public schools, where innumerable things are still taught which no one is concerned to understand, and which few will take the trouble to remember ! Compare Condorcet, *Vie de Turgot*, pp. 255, 256, note.

¹ The statistics of this sort of literature would prove a curious subject for inquiry. No one, I believe, has thought it worth while to sum them up ; but M. Guizot has made an estimate that the Bollandist collection contains more than

in other words, the greater the learning the greater the ignorance.¹ And I entertain no doubt that if, in the seventh and eighth centuries, which were the worst part of that period,² all knowledge of the alphabet had for a while been lost, so that men could no longer read the books in which they delighted, the subsequent progress of Europe would have been more rapid than it really was. For when the progress began, its principal antagonist was that credulity which the literature had fostered. It was not that better books were wanting, but it was that the relish for such books was extinct. There was the literature of Greece and Rome, which the monks not only preserved but even occasionally looked into and copied. But what could that avail such readers as they? So far from recognizing the merit of the ancient writers, they were unable to feel even the beauties of their style, and they trembled at the boldness of their inquiries. At the first glimpse of the light their eyes were blinded. They never turned the leaves of a pagan author without standing aghast at the risk they were running, and they were in constant fear lest by imbibing any of his opinions they should involve themselves in a deadly sin. The result was, that they willingly laid aside the great masterpieces of antiquity, and in their place they substituted those wretched compilations which corrupted their taste, increased their credulity, strengthened their errors, and prolonged the ignorance of Europe by embodying each separate superstition in a written and accessible form, thus perpetuating its influence and enabling it to enfeeble the understanding even of a distant posterity.

twenty-five thousand lives of saints: "à en juger par approximation, ils contiennent plus de 25,000 vies de saints" (Guizot, *Histoire de la Civilisation en France*, Vol. II, p. 32). It is said (Lewin's *Antiquities of Ireland*, p. 62) that of Saint Patrick alone there were sixty-six biographers before Joceline.

¹ For, as Laplace observes, in his remarks on the sources of error in connection with the doctrine of probabilities, "C'est à l'influence de l'opinion de ceux que la multitude juge les plus instruits, et à qui elle a coutume de donner sa confiance sur les plus importants objets de la vie, qu'est due la propagation de ces erreurs qui, dans les temps d'ignorance, ont couvert la face du monde" (Bouillaud, *Philosophie Médicale*, p. 218).

² M. Guizot (*Civilisation en France*, Vol. II, pp. 171, 172) thinks that, on the whole, the seventh was even worse than the eighth, but it is difficult to choose between them.

It is in this way that the nature of the literature possessed by a people is of very inferior importance in comparison with the disposition of the people by whom the literature is to be read. In what are rightly termed the Dark Ages there was a literature in which valuable materials were to be found, but there was no one who knew how to use them. During a considerable period the Latin language was a vernacular dialect,¹ and if men had chosen they might have studied the great Latin authors. But to do this they must have been in a state of society very different from that in which they actually lived. They, like every other people, measured merit by the standard commonly received in their own age, and according to their standard the dross was better than the gold. They therefore rejected the gold and hoarded up the dross. What took place then is, on a smaller scale, taking place now. Every literature contains something that is true and much that is false, and the effect it produces will chiefly depend upon the skill with which the truth is discriminated from the falsehood. New ideas and new discoveries possess prospectively an importance difficult to exaggerate, but until the ideas are received and the discoveries adopted, they exercise no influence and therefore work no good. No literature can ever benefit a people unless it finds them in a state of preliminary preparation. In this respect the analogy with religious opinions is complete. If the religion and the literature of a country are unsuited to its wants, they will be useless, because the literature will be neglected and the religion disobeyed. In such cases even the ablest books are unread and the purest doctrines despised. The works fall into oblivion; the faith is corrupted by heresy.

The other opinion to which I have referred is that the civilization of Europe is chiefly owing to the ability which has been displayed by the different governments, and to the sagacity with which the evils of society have been palliated by legislative

¹ Some of the results of Latin being colloquially employed by the monks are judiciously stated in Herder's *Ideen zur Geschichte der Menschheit*, Vol. IV, pp. 202, 203. The remarks on this custom by Dugald Stewart refer to a later period (Stewart's *Philosophy of the Mind*, Vol. III, pp. 110, 111).

remedies. To any one who has studied history in its original sources this notion must appear so extravagant as to make it difficult to refute it with becoming gravity. Indeed, of all the social theories which have ever been broached there is none so utterly untenable and so unsound in all its parts as this. In the first place we have the obvious consideration that the rulers of a country have, under ordinary circumstances, always been the inhabitants of that country, nurtured by its literature, bred to its traditions, and imbibing its prejudices. Such men are at best only the creatures of the age, never its creators. Their measures are the result of social progress, not the cause of it. This may be proved not only by speculative arguments but also by a practical consideration which any reader of history can verify for himself. No great political improvement, no great reform, either legislative or executive, has ever been originated in any country by its rulers. The first suggesters of such steps have invariably been bold and able thinkers, who discern the abuse, denounce it, and point out how it is to be remedied. But long after this is done, even the most enlightened governments continue to uphold the abuse and reject the remedy. At length, if circumstances are favorable, the pressure from without becomes so strong that the government is obliged to give way, and, the reform being accomplished, the people are expected to admire the wisdom of their rulers by whom all this has been done. That this is the course of political improvement must be well known to whoever has studied the law books of different countries in connection with the previous progress of their knowledge. Full and decisive evidence of this will be brought forward in the present work; but by way of illustration I may refer to the abolition of the corn laws, undoubtedly one of the most remarkable facts in the history of England during the nineteenth century. The propriety and, indeed, the necessity of their abolition is now admitted by every one of tolerable information; and the question arises as to how it was brought about. Those Englishmen who are little versed in the history of their country will say that the real cause was the wisdom of Parliament, while others, attempting to look a little further, will ascribe it to the activity of the Anti-Corn-Law League

and the consequent pressure put upon government. But whoever will minutely trace the different stages through which this great question successively passed will find that the government, the legislature, and the league were the unwitting instruments of a power far greater than all other powers put together. They were simply the exponents of that march of public opinion, which on this subject had begun nearly a century before their time. The steps of this vast movement I shall examine on another occasion; at present it is enough to say that soon after the middle of the eighteenth century the absurdity of protective restrictions on trade was so fully demonstrated by the political economists as to be admitted by every man who understood their arguments and had mastered the evidence connected with them. From this moment the repeal of the corn laws became a matter not of party, nor of expediency, but merely of knowledge. Those who knew the facts opposed the laws; those who were ignorant of the facts favored the laws. It was therefore clear that whenever the diffusion of knowledge reached a certain point the laws must fall. The merit of the league was to assist this diffusion; the merit of the Parliament was to yield to it. It is, however, certain that the members both of league and legislature could at best only slightly hasten what the progress of knowledge rendered inevitable. If they had lived a century earlier, they would have been altogether powerless, because the age would not have been ripe for their labors. They were the creatures of a movement which began long before any of them were born, and the utmost they could do was to put into operation what others had taught, and repeat in louder tones the lessons they had learned from their masters. For, it was not pretended, they did not even pretend themselves, that there was anything new in the doctrines which they preached from the hustings and disseminated in every part of the kingdom. The discoveries had long since been made and were gradually doing their work, encroaching upon old errors, and making proselytes in all directions. The reformers of our time swam with the stream; they aided what it would have been impossible long to resist. Nor is this to be deemed a slight or grudging praise of the services they undoubtedly rendered. The

opposition they had to encounter was still immense, and it should always be remembered as a proof of the backwardness of political knowledge and of the incompetence of political legislators that although the principles of free trade had been established for nearly a century by a chain of arguments as solid as those on which the truths of mathematics are based, they were to the last moment strenuously resisted, and it was only with the greatest difficulty that Parliament was induced to grant what the people were determined to have, and the necessity of which had been proved by the ablest men during three successive generations.

I have selected this instance as an illustration, because the facts connected with it are undisputed, and indeed are fresh in the memory of us all. For it was not concealed at the time, and posterity ought to know, that this great measure which, with the exception of the Reform Bill, is by far the most important ever passed by a British Parliament was like the Reform Bill extorted from the legislature by a pressure from without, that it was conceded not cheerfully but with fear, and that it was carried by statesmen who had spent their lives in opposing what they now suddenly advocated. Such was the history of these events, and such likewise has been the history of all those improvements which are important enough to rank as epochs in the history of modern legislation.

Besides this, there is another circumstance worthy the attention of those writers who ascribe a large part of European civilization to measures originated by European governments. This is, that every great reform which has been effected has consisted not in doing something new but in undoing something old. The most valuable additions made to legislation have been enactments destructive of preceding legislation, and the best laws which have been passed have been those by which some former laws were repealed. In the case just mentioned, of the corn laws, all that was done was to repeal the old laws and leave trade to its natural freedom. When this great reform was accomplished the only result was to place things on the same footing as if legislators had never interfered at all. Precisely the same remark is applicable to another leading improvement in modern legislation,

namely, the decrease of religious persecution. This is unquestionably an immense boon, though unfortunately it is still imperfect, even in the most civilized countries. But it is evident that the concession merely consists in this, that legislators have retraced their own steps and undone their own work. If we examine the policy of the most humane and enlightened governments, we shall find this to be the course they have pursued. The whole scope and tendency of modern legislation is to restore things to that natural channel from which the ignorance of preceding legislation has driven them. This is one of the great works of the present age ; and if legislators do it well, they will deserve the gratitude of mankind. But though we may thus be grateful to individual lawgivers, we owe no thanks to lawgivers considered as a class. For since the most valuable improvements in legislation are those which subvert preceding legislation, it is clear that the balance of good cannot be on their side. It is clear that the progress of civilization cannot be due to those who, on the most important subjects, have done so much harm that their successors are considered benefactors simply because they reverse their policy, and thus restore affairs to the state in which they would have remained if politicians had allowed them to run on in the course which the wants of society required.

Indeed, the extent to which the governing classes have interfered, and the mischiefs which that interference has produced, are so remarkable as to make thoughtful men wonder how civilization could advance in the face of such repeated obstacles. In some of the European countries the obstacles have in fact proved insuperable, and the national progress is thereby stopped. Even in England, where, from causes which I shall presently relate, the higher ranks have for some centuries been less powerful than elsewhere, there has been inflicted an amount of evil which, though much smaller than that incurred in other countries, is sufficiently serious to form a melancholy chapter in the history of the human mind. To sum up these evils would be to write a history of English legislation ; for it may be broadly stated that, with the exception of certain necessary enactments respecting the preservation of order, and the punishment of crime, nearly

everything which has been done, has been done amiss. Thus, to take only such conspicuous facts as do not admit of controversy, it is certain that all the most important interests have been grievously damaged by the attempts of legislators to aid them. Among the accessories of modern civilization there is none of greater moment than trade, the spread of which has probably done more than any other single agent to increase the comfort and happiness of man. But every European government which has legislated much respecting trade has acted as if its main object were to suppress the trade and ruin the traders. Instead of leaving the national industry to take its own course, it has been troubled by an interminable series of regulations, all intended for its good, and all inflicting serious harm. To such a height has this been carried that the commercial reforms which have distinguished England during the last twenty years have solely consisted in undoing this mischievous and intrusive legislation. The laws formerly enacted on this subject, and too many of which are still in force, are marvelous to contemplate. It is no exaggeration to say that the history of the commercial legislation of Europe presents every possible contrivance for hampering the energies of commerce. Indeed, a very high authority, who has maturely studied this subject, has recently declared that if it had not been for smuggling, trade could not have been conducted, but must have perished, in consequence of this incessant interference.¹ However paradoxical this assertion may appear, it will be denied by no one who knows how feeble trade once was, and how strong the obstacles were which opposed it. In every quarter, and at every moment, the hand of government was felt. Duties on importation, and duties on exportation; bounties to raise up a losing trade, and taxes to pull down a remunerative one; this branch of industry forbidden, and that branch of industry encouraged; one article of commerce must not be grown

¹ "C'est à la contrebande que le commerce doit de n'avoir pas péri sous l'influence du régime prohibitif; tandis que ce régime condamnait les peuples à s'approvisionner aux sources les plus éloignées, la contrebande rapprochait les distances, abaissait les prix, et neutralisait l'action funeste des monopoles" (Blanqui, *Histoire de l'Économie Politique en Europe*, Paris, 1845, Vol. II, pp. 25, 26).

because it was grown in the colonies, another article might be grown and bought but not sold again, while a third article might be bought and sold but not leave the country. Then, too, we find laws to regulate wages; laws to regulate prices; laws to regulate profits; laws to regulate the interest of money; customhouse arrangements of the most vexatious kind, aided by a complicated scheme, which was well called the sliding scale, — a scheme of such perverse ingenuity that the duties constantly varied on the same article, and no man could calculate beforehand what he would have to pay. To this uncertainty, itself the bane of all commerce, there was added a severity of exaction, felt by every class of consumers and producers. The tolls were so onerous as to double and often quadruple the cost of production. A system was organized, and strictly enforced, of interference with markets, interference with manufactories, interference with machinery, interference even with shops. The towns were guarded by excisemen, and the ports swarmed with tidewaiters, whose sole business was to inspect nearly every process of domestic industry, peer into every package, and tax every article; while, that absurdity might be carried to its extreme height, a large part of all this was by way of protection; that is to say, the money was avowedly raised, and the inconvenience suffered, not for the use of the government, but for the benefit of the people; in other words, the industrious classes were robbed in order that industry might thrive.

Such are some of the benefits which European trade owes to the paternal care of European legislators. But worse still remains behind. For the economical evils, great as they were, have been far surpassed by the moral evils which this system produced. The first inevitable consequence was that in every part of Europe there arose numerous and powerful gangs of armed smugglers, who lived by disobeying the laws which their ignorant rulers had imposed. These men, desperate from the fear of punishment,¹

¹ The 19 George II, c. 34, made "all forcible acts of smuggling, carried on in defiance of the laws, or *even in disguise to evade them*, felony without benefit of clergy" (Blackstone's Commentaries, Vol. IV, p. 155). Townsend, who traveled through France in 1786, says that when any of the numerous smugglers were taken,

and accustomed to the commission of every crime, contaminated the surrounding population ; introduced into peaceful villages vices formerly unknown ; caused the ruin of entire families ; spread, wherever they came, drunkenness, theft, and dissoluteness ; and familiarized their associates with those coarse and swinish debaucheries which were the natural habits of so vagrant and lawless a life.¹ The innumerable crimes arising from this² are directly chargeable upon the European governments by whom they were provoked. The offenses were caused by the laws ; and now that the laws are repealed, the offenses have disappeared. But it will hardly be pretended that the interests of civilization have been advanced by such a policy as this. It will hardly be pretended that we owe much to a system which, having called into existence a new class of criminals, at length retraces its steps and, though it thus puts an end to the crime, only destroys what its own acts had created.

"some of them are hanged, some are broken upon the wheel, and some are burnt alive" (Townsend's *Spain*, Vol. I, p. 85, edit. 1792). On the general operation of the French laws against smugglers in the eighteenth century, compare Tucker's *Life of Jefferson*, Vol. I, pp. 213, 214, with *Parliamentary History*, Vol. IX, p. 1240.

¹ In a work of considerable ability, the following account is given of the state of things in England and France so late as the year 1824 : "While this was going forward on the English coast, the smugglers on the opposite shore were engaged, with much more labor, risk, and expense, in introducing English woolens, by a vast system of fraud and lying, into the towns, past a series of customhouses. In both countries there was an utter dissoluteness of morals connected with these transactions. Cheating and lying were essential to the whole system ; drunkenness accompanied it ; contempt for all law grew up under it ; honest industry perished beneath it ; and it was crowned with murder" (Martineau's *History of England during Thirty Years' Peace*, 8vo, 1849, Vol. I, p. 341).

² For evidence of the extraordinary extent to which smuggling was formerly carried, and that not secretly, but by powerful bodies of armed men, see *Parliamentary History*, 1290, 1345, Vol. IX, pp. 243, 247 ; Vol. X, pp. 394, 405, 530, 532 ; Vol. XI, p. 935. And on the number of persons engaged in it, compare Tomline's *Life of Pitt*, Vol. I, p. 359 ; see also Sinclair's *History of the Public Revenue*, Vol. III, p. 232 ; Otter's *Life of Clarke*, Vol. I, p. 391. In France the evil was equally great. M. Lemontey says, that early in the eighteenth century, "la contrebande devenait une profession ouverte, et des compagnies de cavalerie désertèrent tout entières leurs étendards pour suivre contre le fisc cette guerre populaire" (Lemontey, *Essai sur l'Établissement Monarchique de Louis XIV*, p. 430). According to Townsend, there were in 1786 "more than 1500 smugglers in the Pyrenees" (Townsend's *Journey through Spain*, Vol. I, p. 84).

It is unnecessary to say that these remarks do not affect the real services rendered to society by every tolerably organized government. In all countries a power of punishing crime and of framing laws must reside somewhere, otherwise the nation is in a state of anarchy. But the accusation which the historian is bound to bring against every government which has hitherto existed is, that it has overstepped its proper functions, and at each step has done incalculable harm. The love of exercising power has been found to be so universal that no class of men who have possessed authority have been able to avoid abusing it. To maintain order, to prevent the strong from oppressing the weak, and to adopt certain precautions respecting the public health are the only services which any government can render to the interests of civilization. That these are services of immense value no one will deny; but it cannot be said that by them civilization is advanced, or the progress of man accelerated. All that is done is to afford the opportunity of progress; the progress itself must depend upon other matters. And that this is the sound view of legislation is moreover evident from the fact that as knowledge is becoming more diffused, and as an increasing experience is enabling each successive generation better to understand the complicated relations of life, just in the same proportion are men insisting upon the repeal of those protective laws, the enactment of which was deemed by politicians to be the greatest triumph of political foresight.

Seeing, therefore, that the efforts of government in favor of civilization are, when most successful, altogether negative; and seeing, too, that when those efforts are more than negative they become injurious, — it clearly follows that all speculations must be erroneous which ascribe the progress of Europe to the wisdom of its rulers. This is an inference which rests not only on the arguments already adduced, but on facts which might be multiplied from every page of history. For, no government having recognized its proper limits, the result is that every government has inflicted on its subjects great injuries; and has done this nearly always with the best intentions. The effects of its protective policy in injuring trade, and, what is far worse, in

increasing crime, have just been noticed ; and to these instances innumerable others might be added. Thus, during many centuries, every government thought it was its bounden duty to encourage religious truth, and discourage religious error. The mischief this has produced is incalculable. Putting aside all other considerations, it is enough to mention its two leading consequences, which are the increase of hypocrisy, and the increase of perjury. The increase of hypocrisy is the inevitable result of connecting any description of penalty with the profession of particular opinions. Whatever may be the case with individuals, it is certain that the majority of men find an extreme difficulty in long resisting constant temptation. And when the temptation comes to them in the shape of honor and emolument, they are too often ready to profess the dominant opinions, and abandon not indeed their belief but the external marks by which that belief is made public. Every man who takes this step is a hypocrite ; and every government which encourages this step to be taken is an abetter of hypocrisy and a creator of hypocrites. Well, therefore, may we say, that when a government holds out as a bait that those who profess certain opinions shall enjoy certain privileges, it plays the part of the tempter of old, and, like the Evil One, basely offers the good things of this world to him who will change his worship and deny his faith. At the same time, and as a part of this system, the increase of perjury has accompanied the increase of hypocrisy. For legislators, plainly seeing that proselytes thus obtained could not be relied upon, have met the danger by the most extraordinary precautions ; and compelling men to confirm their belief by repeated oaths, have thus sought to protect the old creed against the new converts. It is this suspicion as to the motives of others which has given rise to oaths of every kind and in every direction. In England, even the boy at college is forced to swear about matters which he cannot understand, and which far riper minds are unable to master. If he afterwards goes into Parliament, he must again swear about his religion ; and at nearly every stage of political life he must take fresh oaths, the solemnity of which is often strangely contrasted with the trivial

functions to which they are the prelude. A solemn adjuration of the Deity being thus made at every turn, it has happened, as might have been expected, that oaths, enjoined as a matter of course, have at length degenerated into a matter of form. What is lightly taken is easily broken. And the best observers of English society — observers, too, whose characters are very different, and who hold the most opposite opinions — are all agreed on this, that the perjury habitually practiced in England, and of which government is the immediate creator, is so general that it has become a source of national corruption, has diminished the value of human testimony, and has shaken the confidence which men naturally place in the word of their fellow-creatures.¹

The open vices, and, what is much more dangerous, the hidden corruption, thus generated in the midst of society by the ignorant interference of Christian rulers, is indeed a painful subject; but it is one which I could not omit in an analysis of the causes of civilization. It would be easy to push the inquiry still further, and to show how legislators, in every attempt they have made to protect some particular interests, and uphold some particular principles, have not only failed but have brought about results diametrically opposite to those which they proposed. We have seen that their laws in favor of industry have injured industry, that their laws in favor of religion have increased hypocrisy, and that their laws to secure truth have encouraged perjury. Exactly in the same way, nearly every country has taken steps to prevent usury, and keep down the interest of money; and the invariable effect has been to increase usury, and raise the interest

¹ Archbishop Whately says, what hardly any thinking man will now deny, "If oaths were abolished, — leaving the penalties for false witness (no unimportant part of our security) unaltered, — I am convinced that, on the whole, testimony would be more trustworthy than it is" (Whately's *Elements of Rhetoric*, 8vo, 1850, p. 47). See also, on the amount of perjury caused by English legislation, Jeremy Bentham's *Works*, edit. Bowring, Vol. II, p. 210; Vol. V, pp. 191-229, 454-466; Vol. VI, pp. 314, 315; Orme's *Life of Owen*, p. 195; Locke's *Works*, Vol. IV, p. 6; Berkeley's *Works*, Vol. II, p. 196; Whiston's *Memoirs*, pp. 33, 411-413; Hamilton's *Discussions on Philosophy and Literature*, pp. 454, 522, 527, 528. Sir W. Hamilton sums up: "But if the perjury of England stands preëminent in the world, the perjury of the English universities, and of Oxford in particular, stands preëminent in England" (p. 528). Compare Priestley's *Memoirs*, Vol. I, p. 374; and Baker's *Life of Sir Thomas Bernard*, 1819, pp. 188, 189.

of money. For since no prohibition, however stringent, can destroy the natural relation between demand and supply, it has followed that when some men want to borrow, and other men want to lend, both parties are sure to find means of evading a law which interferes with their mutual rights.¹ If the two parties were left to adjust their own bargain undisturbed, the usury would depend on the circumstances of the loan, such as the amount of security, and the chance of repayment. But this natural arrangement has been complicated by the interference of government.² A certain risk being always incurred by those who disobey the law, the usurer, very properly, refuses to lend his money unless he is also compensated for the danger he is in from the penalty hanging over him. This compensation can only be made by the borrower, who is thus obliged to pay what in reality is a double interest: one interest for the natural risk on the loan, and another interest for the extra risk from the law. Such, then, is the position in which every European legislature has placed itself. By enactments against usury, it has increased what it wished to destroy; it has passed laws which the imperative necessities of men compel them to violate; while, to wind up the whole, the penalty for such violation falls on the borrowers, that is, on the very class in whose favor the legislators interfered.³

¹ "L'observation rigoureuse de ces loix seroit destructive de tout commerce; aussi ne sont-elles pas observées rigoureusement" (*Mémoire sur les Prêts d'Argent*, sec. xiv, in *Œuvres de Turgot*, Vol. V, pp. 278, 279). Compare Ricardo's Works, pp. 178, 179, with Condorcet, *Vie de Turgot*, pp. 53, 54, 228.

² Aided by the church. Ecclesiastical councils contain numerous regulations against usury; and in 1179 Pope Alexander ordered that usurers were not to be buried: "Quia in omnibus ferè locis crimen usurarum invaluit; ut multi negotiis prætermisiss quasi licitè usuras exerceant; et qualiter utriusque testamenti pagina condemnentur, non attendunt: ideò constituimus, ut usurarii manifesti nec ad communionem recipiantur altaris, nec Christianam, si in hoc peccato decesserint, accipiant sepulturam, sed nec oblationem eorum quisquam accipiat" (*Rog. de Hoved. Annal. in Rerum Anglicarum Scriptores post Bedam*, p. 335, London, 1596, folio). In Spain the Inquisition took cognizance of usury. See Llorente, *Histoire de l'Inquisition*, Vol. I, p. 339. Compare Ledwich's *Antiquities of Ireland*, p. 133.

³ The whole subject of the usury laws has been treated by Bentham in so complete and exhaustive a manner that I cannot do better than refer the reader to his admirable Letters. A part only of the question is discussed, and that very

In the same meddling spirit, and with the same mistaken notions of protection, the great Christian governments have done other things still more injurious. They have made strenuous and repeated efforts to destroy the liberty of the press, and prevent men from expressing their sentiments on the most important questions in politics and religion. In nearly every country they, with the aid of the church, have organized a vast system of literary police, the sole object of which is to abrogate the undoubted right of every citizen to lay his opinions before his fellow-citizens. In the very few countries where they have stopped short of these extreme steps, they have had recourse to others less violent, but equally unwarrantable. For even where they have not openly forbidden the free dissemination of knowledge, they have done all that they could to check it. On all the implements of knowledge, and on all the means by which it is diffused, such as paper, books, political journals, and the like, they have imposed duties so heavy that they could hardly have done worse if they had been the sworn advocates of popular ignorance. Indeed, looking at what they have actually accomplished, it may be emphatically said that they have taxed the human mind. They have made the very thoughts of men pay toll. Whoever wishes to communicate his ideas to others, and thus do what he can to increase the stock of our acquirements, must first pour his contributions into the imperial exchequer. That is the penalty inflicted on him for instructing his fellow-creatures. That is the blackmail which government extorts from literature, and on receipt of which it accords its favor, and agrees to abstain from further demands. And what causes all this to be the more insufferable is the use which is made of these and similar exactions, wrung from every kind of industry, both bodily and mental. It is truly a frightful consideration, that knowledge is to be hindered, and that the proceeds of honest labor, of patient thought, and sometimes of profound genius are to be diminished, in order that a large part of their scanty earnings may go to swell the pomp of an idle and

imperfectly, in Rey's *Science Sociale*, Vol. III, pp. 64, 65. On the necessity of usury to mitigate the effects of a commercial panic, see Mill's *Principles of Political Economy*, Vol. II, p. 185.

ignorant court, minister to the caprice of a few powerful individuals, and too often supply them with the means of turning against the people resources which the people called into existence.

These and the foregoing statements respecting the effects produced on European society by political legislation are not doubtful or hypothetical inferences, but are such as every reader of history may verify for himself. Indeed, some of them are still acting in England; and in one country or another the whole of them may be seen in full force. When put together, they compose an aggregate so formidable that we may well wonder how, in the face of them, civilization has been able to advance. That under such circumstances it has advanced is a decisive proof of the extraordinary energy of man, and justifies a confident belief that as the pressure of legislation is diminished, and the human mind less hampered, the progress will continue with accelerated speed. But it is absurd, it would be a mockery of all sound reasoning, to ascribe to legislation any share in the progress, or to expect any benefit from future legislators, except that sort of benefit which consists in undoing the work of their predecessors. This is what the present generation claims at their hands; and it should be remembered that what one generation solicits as a boon, the next generation demands as a right. And when the right is pertinaciously refused, one of two things has always happened: either the nation has retrograded, or else the people have risen. Should the government remain firm, this is the cruel dilemma in which men are placed. If they submit, they injure their country; if they rebel, they may injure it still more. In the ancient monarchies of the East their usual plan was to yield; in the monarchies of Europe it has been to resist. Hence those insurrections and rebellions which occupy so large a space in modern history, and which are but repetitions of the old story, the undying struggle between oppressors and oppressed. It would, however, be unjust to deny that in one country the fatal crisis has now for several generations been successfully averted. In one European country, and in one alone, the people have been so strong, and the government so weak, that the history of legislation, taken as a whole, is, notwithstanding a few aberrations,

the history of slow but constant concession: reforms which would have been refused to argument have been yielded from fear; while, from the steady increase of democratic opinions, protection after protection and privilege after privilege have even in our own time been torn away, until the old institutions, though they retain their former name, have lost their former vigor, and there no longer remains a doubt as to what their fate must ultimately be. Nor need we add that in this same country, where, more than in any other of Europe, legislators are the exponents and the servants of the popular will, the progress has, on this account, been more undeviating than elsewhere; there has been neither anarchy nor revolution; and the world has been made familiar with the great truth, that one main condition of the prosperity of a people is that its rulers shall have very little power, that they shall exercise that power very sparingly, and that they shall by no means presume to raise themselves into supreme judges of the national interests, or deem themselves authorized to defeat the wishes of those for whose benefit alone they occupy the post intrusted to them.

XXIII

THE SOCIOLOGICAL VIEW OF MORALS¹

Not for the human race only but for every race there are laws of right living. Given its environment and its structure, and there is for each kind of creature a set of actions adapted in their kinds, amounts, and combinations to secure the highest conservation its nature permits. The animal, like the man, has needs for food, warmth, activity, rest, and so forth, which must be fulfilled in certain relative degrees to make its life whole. Maintenance of its race implies satisfaction of special desires, sexual and philoprogenitive, in due proportions. Hence there is a supposable formula for the activities of each species, which, could it be drawn out, would constitute a system of morality for that species. But such a system of morality would have little or no reference to the welfare of others than self and offspring. Indifferent to individuals of its own kind, as an inferior creature is, and habitually hostile to individuals of other kinds, the formula for its life could take no cognizance of the lives of those with which it came in contact; or rather, such formula would imply that maintenance of its life was at variance with maintenance of their lives.

But on ascending from beings of lower kinds to the highest kind of being, man; or, more strictly, on ascending from man in his presocial stage to man in his social stage, the formula has to include an additional factor. Though not peculiar to human life under its developed form, the presence of this factor is still, in the highest degree, characteristic of it. Though there are inferior species displaying considerable degrees of sociality, and though the formulas for their complete lives would have to take account of the relations arising from union, yet our own species

¹ From the *Data of Ethics*, by Herbert Spencer, chap. viii, D. Appleton & Co., New York.

is, on the whole, to be distinguished as having a formula for complete life which specially recognizes the relations of each individual to others, in presence of whom, and in coöperation with whom, he has to live.

This additional factor in the problem of complete living is, indeed, so important that the necessitated modifications of conduct have come to form a chief part of the code of conduct. Because the inherited desires which directly refer to the maintenance of individual life are fairly adjusted to the requirements, there has been no need to insist on that conformity to them which furthers self-conservation. Conversely, because these desires prompt activities that often conflict with the activities of others, and because the sentiments responding to others' claims are relatively weak, moral codes emphasize those restraints on conduct which the presence of fellow-men entails.

From the sociological point of view, then, ethics becomes nothing else than a definite account of the forms of conduct that are fitted to the associated state, in such wise that the lives of each and all may be the greatest possible, alike in length and breadth.

But here we are met by a fact which forbids us thus to put in the foreground the welfares of citizens, individually considered, and requires us to put in the foreground the welfare of the society as a whole. The life of the social organism must, as an end, rank above the lives of its units. These two ends are not harmonious at the outset; and though the tendency is toward harmonization of them, they are still partially conflicting.

As fast as the social state establishes itself, the preservation of the society becomes a means of preserving its units. Living together arose because, on the average, it proved more advantageous to each than living apart; and this implies that maintenance of combination is maintenance of the conditions to more satisfactory living than the combined persons would otherwise have. Hence, social self-preservation becomes a proximate aim, taking precedence of the ultimate aim, — individual self-preservation.

This subordination of personal to social welfare is, however, contingent: it depends on the presence of antagonistic societies.

So long as the existence of a community is endangered by the actions of communities around, it must remain true that the interests of individuals must be sacrificed to the interests of the community, as far as is needful for the community's salvation. But if this is manifest, it is, by implication, manifest that when social antagonisms cease this need for sacrifice of private claims to public claims ceases also; or rather, there cease to be any public claims at variance with private claims. All along, furtherance of individual lives has been the ultimate end; and if this ultimate end has been postponed to the proximate end of preserving the community's life, it has been so only because this proximate end was instrumental to the ultimate end. When the aggregate is no longer in danger the final object of pursuit, the welfare of the units, no longer needing to be postponed, becomes the immediate object of pursuit.

Consequently unlike sets of conclusions respecting human conduct emerge, according as we are concerned with a state of habitual or occasional war, or are concerned with a state of permanent and general peace. Let us glance at these alternative states and the alternative implications.

At present the individual man has to carry on his life with due regard to the lives of others belonging to the same society; while he is sometimes called on to be regardless of the lives of those belonging to other societies. The same mental constitution having to fulfill both these requirements is necessarily incongruous; and the correlative conduct, adjusted first to the one need and then to the other, cannot be brought within any consistent ethical system.

Hate and destroy your fellow-man, is now the command; and then the command is, Love and aid your fellow-man. Use every means to deceive, says the one code of conduct; while the other code says, Be truthful in word and deed. Seize what property you can and burn all you cannot take away, are injunctions which the religion of enmity countenances; while by the religion of amity, theft and arson are condemned as crimes. And as conduct has to be made up of parts thus at variance with one another, the theory of conduct remains confused.

There coexists a kindred irreconcilability between the sentiments answering to the forms of coöperation required for militancy and industrialism respectively. While social antagonisms are habitual, and while, for efficient action against other societies, there needs great subordination to men who command, the virtue of loyalty and the duty of implicit obedience have to be insisted on; disregard of the ruler's will is punished with death. But when war ceases to be chronic, and growing industrialism habituates men to maintaining their own claims while respecting the claims of others, loyalty becomes less profound, the authority of the ruler is questioned or denied in respect of various private actions and beliefs. State dictation is in many directions successfully defied, and the political independence of the citizen comes to be regarded as a claim which it is virtuous to maintain and vicious to yield up. Necessarily during the transition these opposite sentiments are incongruously mingled.

So is it, too, with domestic institutions under the two *régimes*. While the first is dominant, ownership of a slave is honorable, and in the slave submission is praiseworthy; but as the last grows dominant, slave owning becomes a crime and servile obedience excites contempt. Nor is it otherwise in the family. The subjection of women to men, complete while war is habitual but qualified as fast as peaceful occupations replace it, comes eventually to be thought wrong, and equality before the law is asserted. At the same time the opinion concerning paternal power changes. The once unquestioned right of the father to take his children's lives is denied, and the duty of absolute submission to him, long insisted on, is changed into the duty of obedience within reasonable limits.

Were the ratio between the life of antagonism with alien societies and the life of peaceful coöperation within each society a constant ratio, some permanent compromise between the conflicting rules of conduct appropriate to the two lives might be reached. But since this ratio is a variable one, the compromise can never be more than temporary. Ever the tendency is toward congruity between beliefs and requirements. Either the social arrangements are gradually changed until they come into

harmony with prevailing ideas and sentiments, or, if surrounding conditions prevent change in the social arrangements, the necessitated habits of life modify the prevailing ideas and sentiments to the requisite extent. Hence, for each kind and degree of social evolution determined by external conflict and internal friendship, there is an appropriate compromise between the moral code of enmity and the moral code of amity: not, indeed, a definable, consistent compromise, but a compromise fairly well understood.

This compromise, vague, ambiguous, illogical, though it may be, is nevertheless for the time being authoritative. For if, as above shown, the welfare of the society must take precedence of the welfares of its component individuals, during those stages in which the individuals have to preserve themselves by preserving their society, then such temporary compromise between the two codes of conduct as duly regards external defense, while favoring internal coöperation to the greatest extent practicable, subserves the maintenance of life in the highest degree, and thus gains the ultimate sanction. So that the perplexed and inconsistent moralities of which each society and each age shows us a more or less different one are severally justified as being approximately the best under the circumstances.

But such moralities are, by their definitions, shown to belong to incomplete conduct; not to conduct that is fully evolved. We saw that the adjustments of acts to ends which, while constituting the external manifestations of life, conduce to the continuance of life, have been rising to a certain ideal form now approached by the civilized man. But this form is not reached so long as there continue aggressions of one society upon another. Whether the hindrances to complete living result from the trespasses of fellow-citizens, or from the trespasses of aliens, matters not; if they occur there does not yet exist the state defined. The limit to the evolution of conduct is arrived at by members of each society only when, being arrived at by members of other societies also, the causes of international antagonism end simultaneously with the causes of antagonism between individuals.

And now having from the sociological point of view recognized the need for, and authority of, these changing systems of ethics, proper to changing ratios between warlike activities and peaceful activities, we have, from the same point of view, to consider the system of ethics proper to the state in which peaceful activities are undisturbed.

If, excluding all thought of danger or hindrances from causes external to a society, we set ourselves to specify those conditions under which the life of each person, and therefore of the aggregate, may be the greatest possible, we come upon certain simple ones which, as here stated, assume the form of truisms.

For, as we have seen, the definition of that highest life accompanying completely evolved conduct itself excludes all acts of aggression, — not only murder, assault, robbery, and the major offenses generally, but minor offenses, such as libel, injury to property, and so forth. While directly deducting from individual life, these indirectly cause perturbations of social life. Trespasses against others rouse antagonisms in them; and if these are numerous the group loses coherence. Hence, whether the integrity of the group itself is considered as the end, or whether the end considered is the benefit ultimately secured to its units by maintaining its integrity, or whether the immediate benefit of its units taken separately is considered the end, the implication is the same: such acts are at variance with achievement of the end. That these inferences are self-evident and trite (as indeed the first inferences drawn from the data of every science that reaches the deductive stage naturally are) must not make us pass lightly over the all-important fact that, from the sociological point of view, the leading moral laws are seen to follow as corollaries from the definition of complete life carried on under social conditions.

Respect for these primary moral laws is not enough, however. Associated men pursuing their several lives without injuring one another, but without helping one another, reap no advantages from association beyond those of companionship. If, while there is no coöperation for defensive purposes (which is here excluded by the hypothesis) there is also no coöperation for

satisfying wants, the social state loses its *raison d'être* — almost, if not entirely. There are, indeed, people who live in a condition little removed from this, as the Eskimo. But though these, exhibiting none of the coöperation necessitated by war, which is unknown to them, lead lives such that each family is substantially independent of others, occasional coöperation occurs. And, indeed, that families should live in company without ever yielding mutual aid is scarcely conceivable.

Nevertheless, whether actually existing or only approached, we must here recognize as hypothetically possible a state in which these primary moral laws are conformed to, for the purpose of observing, in their uncomplicated forms, what are the negative conditions to harmonious social life. Whether the members of a social group do or do not coöperate, certain limitations to their individual activities are necessitated by their association; and after recognizing these as arising in the absence of coöperation, we shall be the better prepared to understand how conformity to them is effected when coöperation begins.

For whether men live together in quite independent ways, careful only to avoid aggressing; or whether advancing from passive association to active association they coöperate, — their conduct must be such that the achievement of ends by each shall at least not be hindered. And it becomes obvious that when they coöperate there must not only be no resulting hindrance but there must be facilitation, since in the absence of facilitation there can be no motive to coöperate. What shape, then, must the mutual restraints take when coöperation begins? Or rather, what, in addition to the primary mutual restraints already specified, are those secondary mutual restraints required to make coöperation possible?

One who, living in an isolated way, expends effort in pursuit of an end gets compensation for the effort by securing the end, and so achieves satisfaction. If he expends the effort without achieving the end, there results dissatisfaction. The satisfaction and the dissatisfaction are measures of success and failure in life-sustaining acts, since that which is achieved by effort is

something which directly or indirectly furthers life, and so pays for the cost of the effort ; while if the effort fails there is nothing to pay for the cost of it, and so much life is wasted. What must result from this when men's efforts are joined ? The reply will be made clearer if we take the successive forms of coöperation in the order of ascending complexity. We may distinguish as homogeneous coöperation (1) that in which like efforts are joined for like ends that are simultaneously enjoyed. As coöperation that is not completely homogeneous we may distinguish (2) that in which like efforts are joined for like ends that are not simultaneously enjoyed. A coöperation of which the heterogeneity is more distinct is (3) that in which unlike efforts are joined for like ends. And lastly comes the decidedly heterogeneous coöperation, (4) that in which unlike efforts are joined for unlike ends.

The simplest and earliest of these in which men's powers, similar in kind and degree, are united in pursuit of a benefit which, when obtained, they all participate in, is most familiarly exemplified in the catching of game by primitive men, — this simplest and earliest form of industrial coöperation being also that which is least differentiated from militant coöperation ; for the coöperators are the same, and the processes, both destructive of life, are carried on in analogous ways. The condition under which such coöperation may be successfully carried on is that the coöperators shall share alike in the produce. Each thus being enabled to repay himself in food for the expended effort, and being further enabled to achieve other such desired ends as maintenance of family, obtains satisfaction ; there is no aggression of one on another, and the coöperation is harmonious. Of course the divided produce can be but roughly proportioned to the several efforts joined in obtaining it, but there is actually among savages, as we see that for harmonious coöperation there must be, a recognition of the principle that efforts when combined shall severally bring equivalent benefits, as they would do if they were separate. Moreover, beyond the taking equal shares in return for labors that are approximately equal, there is generally an attempt at proportioning benefit to achievement, by

assigning something extra, in the shape of the best part or the trophy, to the actual slayer of the game. And obviously, if there is a wide departure from this system of sharing benefits when there has been a sharing of efforts, the coöperation will cease. Individual hunters will prefer to do the best they can for themselves separately.

Passing from this simplest case of coöperation to a case not quite so simple, — a case in which the homogeneity is incomplete, — let us ask how a member of the group may be led without dissatisfaction to expend effort in achieving a benefit which, when achieved, is enjoyed exclusively by another? Clearly he may do this on condition that the other shall afterward expend a like effort, the beneficial result of which shall be similarly rendered up by him in return. This exchange of equivalents of effort is the form which social coöperation takes while yet there is little or no division of labor, save that between the sexes. For example, the Bodo and Dhimals “mutually assist each other for the nonce, as well in constructing their houses as in clearing their plots for cultivation.” And this principle, — I will help you if you will help me, — common in simple communities where the occupations are alike in kind, and occasionally acted upon in more advanced communities, is one under which the relation between effort and benefit, no longer directly maintained, is maintained indirectly. For whereas when men’s activities are carried on separately, or are joined in the way exemplified above, effort is immediately paid for by benefit, in this form of coöperation the benefit achieved by effort is exchanged for a like benefit to be afterward received when asked for. And in this case as in the preceding case, coöperation can be maintained only by fulfillment of the tacit agreements. For if they are habitually not fulfilled, there will commonly be refusal to give aid when asked; and each man will be left to do the best he can by himself. All those advantages to be gained by union of efforts in doing things that are beyond the powers of the single individual will be unachievable. At the outset, then, fulfillment of contracts that are implied, if not expressed, becomes a condition to social coöperation, and therefore to social development.

From these simple forms of coöperation in which the labors men carry on are of like kinds, let us turn to the more complex forms in which they carry on labors of unlike kinds. Where men mutually aid in building huts or felling trees, the number of days' work now given by one to another is readily balanced by an equal number of days' work afterward given by the other to him. And no estimation of the relative values of the labors being required, a definite understanding is little needed. But when division of labor arises, — when there come transactions between one who makes weapons and another who dresses skins for clothing, or between a grower of roots and a catcher of fish, — neither the relative amounts nor the relative qualities of their labors admit of easy measure; and with the multiplication of businesses, implying numerous kinds of skill and power, there ceases to be anything like manifest equivalence between either the bodily and mental efforts set against one another, or between their products. Hence the arrangement cannot now be taken for granted, as while the things exchanged are like in kind: it has to be stated. If A allows B to appropriate a product of his special skill, on condition that he is allowed to appropriate a different product of B's special skill, it results that as equivalence of the two products cannot be determined by direct comparison of their quantities and qualities, there must be a distinct understanding as to how much of the one may be taken in consideration of so much of the other.

Only under voluntary agreement, then, no longer tacit and vague, but overt and definite, can coöperation be harmoniously carried on when division of labor becomes established. And as in the simplest coöperation, where like efforts are joined to secure a common good, the dissatisfaction caused in those who, having expended their labors, do not get their share of the good prompts them to cease coöperating; as in the more advanced coöperation, achieved by exchanging equal labors of like kind expended at different times, aversion to coöperate is generated if the expected equivalent of labor is not rendered, so in this developed coöperation, the failure of either to surrender to the other that which was avowedly recognized as of like value with the labor

or product given tends to prevent coöperation by exciting discontent with its results. And evidently, while antagonisms thus caused impede the lives of the units, the life of the aggregate is endangered by diminished cohesion.

Beyond these comparatively direct mischiefs, special and general, there have to be noted indirect mischiefs. As already implied by the reasoning in the last paragraph, not only social integration but also social differentiation is hindered by breach of contract.

In Part II of the *Principles of Sociology*, it was shown that the fundamental principles of organization are the same for an individual organism and for a social organism, because both consist of mutually dependent parts. In the one case as in the other, the assumption of unlike activities by the component members is possible only on condition that they severally benefit in due degrees by one another's activities. That we may the better see what are the implications in respect of social structures, let us first note the implications in respect of individual structures.

The welfare of a living body implies an approximate equilibrium between waste and repair. If the activities involve an expenditure not made good by nutrition, dwindling follows. If the tissues are enabled to take up from the blood enriched by food fit substances enough to replace those used up in efforts made, the weight may be maintained. And if the gain exceeds the loss, growth results.

That which is true of the whole in its relations to the external world is no less true of the parts in their relations to one another. Each organ, like the entire organism, is wasted by performing its function, and has to restore itself from the materials brought to it. If the quantity of materials furnished by the joint agency of the other organs is deficient, the particular organ dwindles. If they are sufficient, it can maintain its integrity. If they are in excess, it is enabled to increase. To say that this arrangement constitutes the physiological contract is to use a metaphor which, though not true in aspect, is true in essence. For the relations of structures are actually such that,

by the help of a central regulative system, each organ is supplied with blood in proportion to the work it does. As was pointed out (*Principles of Sociology*, sec. 254), well-developed animals are so constituted that each muscle or viscus, when called into action, sends to the vasomotor centers through certain nerve fibers an impulse caused by its action; whereupon, through other nerve fibers, there comes an impulse causing dilatation of its blood vessels. That is to say, all other parts of the organism, when they jointly require it to labor, forthwith begin to pay it in blood. During the ordinary state of physiological equilibrium, the loss and the gain balance, and the organ does not sensibly change. If the amount of its function is increased within such moderate limits that the local blood vessels can bring adequately increased supplies, the organ grows; beyond replacing its losses by its gains, it makes a profit on its extra transactions, so being enabled by extra structures to meet extra demands. But if the demands made on it become so great that the supply of materials cannot keep pace with the expenditure, either because the local blood vessels are not large enough, or for any other reason, then the organ begins to decrease from excess of waste over repair: there sets in what is known as atrophy. Now since each of the organs has thus to be paid in nutriment for its services by the rest, it follows that the due balancing of their respective claims and payments is requisite, directly for the welfare of each organ, and indirectly for the welfare of the organism. For in a whole formed of mutually dependent parts, anything which prevents due performance of its duty by one part reacts injuriously on all the parts.

With change of terms these statements and inferences hold of a society. That social division of labor which parallels in so many other respects the physiological division of labor parallels it in this respect also. As was shown at large in the *Principles of Sociology*, Part II, each order of functionaries and each group of producers, severally performing some action or making some article not for direct satisfaction of their own needs but for satisfaction of the needs of fellow-citizens in general, otherwise occupied, can continue to do this only so long as the expenditures

of effort and returns of profit are approximately equivalent. Social organs, like individual organs, remain stationary if there come to them normal proportions of the commodities produced by the society as a whole. If because the demands made on an industry or profession are unusually great, those engaged in it make excessive profits, more citizens flock to it, and the social structure constituted by its members grows; while decrease of the demands, and therefore of the profits, either leads its members to choose other careers, or stops the accessions needful to replace those who die, and the structure dwindles. Thus is maintained that proportion among the powers of the component parts which is most conducive to the welfare of the whole.

And now mark that the primary condition to achievement of this result is fulfillment of contract. If from the members of any part payment is frequently withheld, or falls short of the promised amount, then, through ruin of some and abandonment of the occupation by others, the part diminishes; and if it was before not more than competent to do its duty, it now becomes incompetent, and the society suffers. Or if social needs throw on some part great increase of function, and the members of it are enabled to get for their services unusually high prices, fulfillment of the agreements to give them these high prices is the only way of drawing to the part such additional number of members as will make it equal to the augmented demands. For citizens will not come to it if they find the high prices agreed upon are not paid.

Briefly, then, the universal basis of coöperation is the proportioning of benefits received to services rendered. Without this there can be no physiological division of labor; without this there can be no sociological division of labor. And since division of labor, physiological or sociological, profits the whole and each part, it results that on maintenance of the arrangements necessary to it depend both special and general welfare. In a society such arrangements are maintained only if bargains, overt or tacit, are carried out. So that beyond the primary requirement to harmonious coexistence in a society, that its units shall not directly aggress on one another, there comes this secondary

requirement, that they shall not indirectly aggress by breaking agreements.

But now we have to recognize the fact that complete fulfillment of these conditions, original and derived, is not enough. Social coöperation may be such that no one is impeded in the obtainment of the normal return for effort, but contrariwise is aided by equitable exchange of services; and yet much may remain to be achieved. There is a theoretically possible form of society, purely industrial in its activities, which, though approaching nearer to the moral ideal in its code of conduct than any society not purely industrial, does not fully reach it.

For while industrialism requires the life of each citizen to be such that it may be carried on without direct or indirect aggressions on other citizens, it does not require his life to be such that it shall directly further the lives of other citizens. It is not a necessary implication of industrialism, as thus far defined, that each, beyond the benefits given and received by exchange of services, shall give and receive other benefits. A society is conceivable formed of men leading perfectly inoffensive lives, scrupulously fulfilling their contracts, and efficiently rearing their offspring, who yet, yielding to one another no advantages beyond those agreed upon, fall short of that highest degree of life which the gratuitous rendering of services makes possible. Daily experiences prove that every one would suffer many evils and lose many goods did none give him unpaid assistance. The life of each would be more or less damaged had he to meet all contingencies, single-handed. Further, if no one did for his fellows anything more than was required by strict performance of contract, private interests would suffer from the absence of attention to public interests. The limit of evolution of conduct is consequently not reached until, beyond avoidance of direct and indirect injuries to others, there are spontaneous efforts to further the welfare of others.

It may be shown that the form of nature which thus to justice adds beneficence is one which adaptation to the social state produces. The social man has not reached that harmonization of constitution with conditions forming the limit of evolution so

long as there remains space for the growth of faculties which, by their exercise, bring positive benefit to others and satisfaction to self. If the presence of fellow-men, while putting certain limits to each man's sphere of activity, opens certain other spheres of activity in which feelings, while achieving their gratifications, do not diminish but add to the gratifications of others, then such spheres will inevitably be occupied. Recognition of this truth does not, however, call on us to qualify greatly that conception of the industrial state above set forth, since sympathy is the root of both justice and beneficence.

Thus the sociological view of ethics supplements the physical, the biological, and the psychological views, by disclosing those conditions under which only associated activities can be so carried on that the complete living of each consists with and conduces to the complete living of all.

At first the welfare of social groups, habitually in antagonism with other such groups, takes precedence of individual welfare; and the rules of conduct which are authoritative for the time being involve incompleteness of individual life that the general life may be maintained. At the same time the rules have to enforce the claims of individual life as far as may be, since on the welfare of the units the welfare of the aggregate largely depends.

In proportion as societies endanger one another less, the need for subordinating individual lives to the general life decreases; and with approach to a peaceful state, the general life, having from the beginning had furtherance of individual lives as its ultimate purpose, comes to have this as its proximate purpose.

During the transitional stages there are necessitated successive compromises between the moral code which asserts the claims of the society *versus* those of the individual, and the moral code which asserts the claims of the individual *versus* those of the society. And evidently each such compromise, though for the time being authoritative, admits of no consistent or definite expression.

But gradually as war declines — gradually as the compulsory coöperation needful in dealing with external enemies becomes

unnecessary, and leaves behind the voluntary coöperation which effectually achieves internal sustentation — there grows increasingly clear the code of conduct which voluntary coöperation implies. And this final permanent code alone admits of being definitely formulated, and so constituting ethics as a science in contrast with empirical ethics.

The leading traits of a code, under which complete living through voluntary coöperation is secured, may be simply stated. The fundamental requirement is that the life-sustaining actions of each shall severally bring him the amounts and kinds of advantage naturally achieved by them, and this implies, firstly, that he shall suffer no direct aggressions on his person or property, and secondly, that he shall suffer no indirect aggressions by breach of contract. Observance of these negative conditions to voluntary coöperation having facilitated life to the greatest extent by exchange of services under agreement, life is to be further facilitated by exchange of services beyond agreement, the highest life being reached only when, besides helping to complete one another's lives by specified reciprocities of aid, men otherwise help to complete one another's lives.

XXIV

THE STRUGGLE FOR THE LIFE OF OTHERS¹

We now open a wholly new, and by far the most important, chapter in the evolution of man. Up to this time we have found for him a body and the rudiments of mind. But man is not a body nor a mind. The temple still awaits its final tenant, — the higher human soul.

With a body alone, man is an animal : the highest animal, yet a pure animal ; struggling for its own narrow life, living for its small and sordid ends. Add a mind to that and the advance is infinite. The struggle for life assumes the august form of a struggle for light : he who was once a savage, pursuing the arts of the chase, realizes Aristotle's ideal man, "a hunter after truth." Yet this is not the end. Experience tells us that man's true life is neither lived in the material tracts of the body, nor in the higher altitudes of the intellect, but in the warm world of the affections. Till he is equipped with these man is not human. He reaches his full height only when love becomes to him the breath of life, the energy of will, the summit of desire. There at last lies all happiness, and goodness, and truth, and divinity :

For the loving worm within its clod
Were diviner than a loveless God.

That love did not come down to us through the struggle for life, the only great factor in evolution which up to this time has been dwelt upon, is self-evident. It has a lineage all its own. Yet inexplicable though the circumstance be, the history of this force, the most stupendous the world has even known, has scarcely even begun to be investigated. Every other principle in nature

¹ From *The Ascent of Man*, by Henry Drummond (copyright, 1894, by James Pott & Co., New York).

has had a thousand prophets, but this supreme dynamic has run its course through the ages unobserved ; its rise, so far as science is concerned, is unknown ; its story has never been told. But if any phenomenon or principle in nature is capable of treatment under the category of evolution, this is. Love is not a late arrival, an afterthought, with creation. It is not a novelty of a romantic civilization. It is not a pious word of religion. Its roots began to grow with the first cell of life which budded on this earth. How great it is, the history of humanity bears witness ; but how old it is and how solid, how bound up with the very constitution of the world, how from the first of time an eternal part of it, we are only now beginning to perceive. For the evolution of love is a piece of pure science. Love did not descend out of the clouds like rain or snow. It was distilled on earth. And few of the romances which in after years were to cluster round this immortal word are more wonderful than the story of its birth and growth. Partly a product of crushed lives and exterminated species, and partly of the choicest blossoms and sweetest essences that ever came from the tree of life, it reached its spiritual perfection after a history the most strange and checkered that the pages of nature have to record. What love was at first, how crude and sour and embryonic a thing, it is impossible to conceive. But from age to age, with immeasurable faith and patience, by cultivations continuously repeated, by transplantings endlessly varied, the unrecognizable germ of this new fruit was husbanded to its maturity, and became the tree on which humanity, society, and civilization were ultimately borne.

As the story of evolution is usually told, love — the evolved form, as we shall see, of the struggle for the life of others — has not even a place. Almost the whole emphasis of science has fallen upon the opposite, — the animal struggle for life. Hunger was early seen by the naturalists to be the first and most imperious appetite of all living things, and the course of nature came to be erroneously interpreted in terms of a never-ending strife. Since there are vastly more creatures born than can ever survive, since for every morsel of food provided a hundred claimants appear, life to an animal was described to us as one long tragedy ;

and poetry, borrowing the imperfect creed, pictured nature only as a blood-red fang. Before we can go on to trace the higher progress of love itself, it is necessary to correct this misconception. And no words can be thrown away if they serve, in whatever imperfect measure, to restore to honor what is in reality the supreme factor in the evolution of the world. To interpret the whole course of nature by the struggle for life is as absurd as if one were to define the character of St. Francis by the tempers of his childhood. Worlds grow up as well as infants; their tempers change, the better nature opens out, new objects of desire appear, higher activities are added to the lower. The first chapter or two of the story of evolution may be headed *The Struggle for Life*; but take the book as a whole, it is not a tale of battle: it is a love story.

The circumstances, as has been already pointed out in the introduction,¹ under which the world at large received its main impression of evolution, obscured these later and happier features. The modern revival of the evolution theory occurred almost solely in connection with investigations in the lower planes of nature, and was due to the stimulus of the pure naturalists, notably of Mr. Darwin. But what Mr. Darwin primarily undertook to explain was simply the origin of species. His work was a study in infancies, in rudiments; he emphasized the earliest forces and the humblest phases of the world's development. The struggle for life was there the most conspicuous fact, — at least, on the surface; it formed the keynote of his teaching; and the tragic side of nature fixed itself in the popular mind. The mistake the world made was twofold: it mistook Darwinism for evolution, — a specific theory of evolution applicable to a single department for a universal scheme; and it misunderstood Mr. Darwin himself. That the foundations of Darwinism — or what was taken for Darwinism — were the foundations of all nature was assumed. Dazzled with the apparent solidity of this foundation, men made haste to run up a structure which included the whole vast range of life, — vegetal, animal, social, — based on a law which explained but half the facts, and was only relevant, in

¹ This refers to Drummond's *Ascent of Man*.

the crude form in which it was universally stated, for the childhood of the world. It was impossible for such an edifice to stand. Natural history cannot in any case cover the whole facts of human history, and, so interpreted, can only fatally distort them. The mistake had been largely qualified had Mr. Darwin's followers even accepted his foundation in its first integrity; but, perhaps because the author of the theory himself but dimly apprehended the complement of his thesis, few seem to have perceived that anything was amiss. Mr. Darwin's sagacity led him distinctly to foresee that narrow interpretations of his great phrase "struggle for existence" were certain to be made; and in the opening chapters of the *Origin of Species*, he warns us that the term must be applied in its "large and metaphorical sense, including dependence of one being on another, and including (which is more important) not only the life of the individual, but success in leaving progeny."¹ In spite of this warning, his overmastering emphasis on the individual struggle for existence seems to have obscured, if not to his own mind, certainly to almost all his followers, the truth that any other great factor in evolution existed.

The truth is, there are *two* struggles for life in every living thing, — the struggle for life, and the struggle for the life of others. The web of life is woven upon a double set of threads, the second thread distinct in color from the first, and giving a totally different pattern to the finished fabric. As the whole aspect of the after-world depends on this distinction of strands in the warp, it is necessary to grasp the distinction with the utmost clearness. Already, in the introductory chapter,² the nature of the distinction has been briefly explained. But it is necessary to be explicit here, even to redundancy. We have arrived at a point from which the ascent of man takes a fresh departure, a point from which the course of evolution begins to wear an entirely altered aspect. No such consummation ever before occurred in the progress of the world as the rise to potency in human life of the struggle for the life of others. The struggle for the life of others is the physiological name for the greatest word of ethics —

¹ *Origin of Species*, 6th ed., p. 50.

² This refers to Drummond's *Ascent of Man*.

otherism, altruism, love. From selfishism to otherism is the supreme transition of history. It is therefore impossible to lodge in the mind with too much solidity the simple biological fact on which the altruistic struggle rests. Were this a late phase of evolution, or a factor applicable to single genera, it would still be of supreme importance; but it is radical, universal, involved in the very nature of life itself. As matter is to be interpreted by science in terms of its properties, life is to be interpreted in terms of its functions. And when we dissect down to that form of matter with which all life is associated, we find it already discharging in the humblest organisms visible by the microscope the function on which the stupendous superstructure of altruism indirectly comes to rest. Take the tiniest protoplasmic cell, immerse it in a suitable medium, and presently it will perform two great acts, — the two which sum up life, which constitute the eternal distinction between the living and the dead, — nutrition and reproduction. At one moment, in pursuance of the struggle for life, it will call in matter from without, and assimilate it to itself; at another moment, in pursuance of the struggle for the life of others, it will set a portion of that matter apart, add to it, and finally give it away to form another life. Even at its dawn life is receiver and giver; even in protoplasm is selfishism and otherism. These two tendencies are not fortuitous. They have been lived into existence. They are not grafts on the tree of life: they are its nature, its essential life. They are not painted on the canvas but woven through it.

The two main activities, then, of all living things are nutrition *and* reproduction. The discharge of these functions in plants, and largely in animals, sums up the work of life. The object of nutrition is to secure the life of the individual; the object of reproduction is to secure the life of the species. These two objects are thus wholly different. The first has a purely personal end; its attention is turned inwards; it exists only for the present. The second, in a greater or less degree, is impersonal; its attention is turned outwards; it lives for the future. One of these objects, in other words, is self-regarding; the other is other-regarding. Both, of course, at the outset are wholly selfish;

both are parts of the struggle for life. Yet see already in this nonethical region a parting of the ways. Selfishness and unselfishness are two supreme words in the moral life. The first, even in physical nature, is accompanied by the second. In the very fact that one of the two mainsprings of life is other-regarding, there lies a prophecy, a suggestion, of the day of altruism. In organizing the physiological mechanism of reproduction in plants and animals, nature was already laying wires on which one far-off day the currents of all higher things might travel.

In itself, this second struggle, this effort to maintain the life of the species, is not less real than the first; the provisions for effecting it are not less wonderful; the whole is not less a part of the system of things. And taken prophetically, the function of reproduction is as much greater than the function of nutrition as the man is greater than the animal, as the soul is higher than the body, as coöperation is stronger than competition, as love is stronger than hate. If it were ever to be charged against nature that she was wholly selfish, here is the refutation at the very start. One of the two fundamental activities of all life, whether plant or animal, is other-regarding. It is not said that the function of reproduction, say, in a fern or in an oak, is an unselfish act, yet in a sense, even though begotten of self, it is an other-regarding act. In the physical world, to speak of the struggle for food as selfish, or to call the struggle for species unselfish, are alike incongruous. But if the morality of nature is impugned on the ground of the universal struggle for life, it is at least as relevant to refute the charge by putting moral content into the universal struggle for species. No true moral content can be put into either, yet the one marks the beginning of egoism, the other of altruism. Almost the whole self-seeking side of things has come down the line of the individual struggle for life; almost the whole unselfish side of things is rooted in the struggle to preserve the life of others.

That an other-regarding principle should sooner or later appear on the world's stage was a necessity if the world was ever to become a moral world. And as everything in the moral world has what may be called a physical basis to begin with, it is not

surprising to find in the mere physiological process of reproduction a physical forecast of the higher relations, or, more accurately, to find the higher relations manifesting themselves at first through physical relations. The struggle for the life of others formed an indispensable stepping-stone to the development of the other-regarding virtues. Nature always works with long roots. To conduct otherism upward into the higher sphere without miscarriage, and to establish it there forever, nature had to imbed it in the most ancient past, so organizing and endowing protoplasm that life could not go on without it, and compelling its continuous activity by the sternest physiological necessity.

To say that there is a certain protest of the mind against associating the highest ethical ends with forces in their first stage almost physical is to confess a truth which all must feel. Even Haeckel, in contrasting the tiny rootlet of sex attraction between two microscopic cells with the mighty after-efflorescence of love in the history of mankind, is staggered at the audacity of the thought, and pauses in the heart of a profound scientific investigation to reflect upon it. After a panegyric in which he says, "We glorify love as the source of the most splendid creations of art; of the noblest productions of poetry, of plastic art, and of music; we reverence in it the most powerful factor in human civilization, the basis of family life, and consequently, of the development of the state," . . . he adds, "So wonderful is love, and so immeasurably important is its influence on mental life, that in this point, more than in any other, 'supernatural' causation seems to mock every natural explanation." It is the mystery of nature, that between the loftiest spiritual heights and the lowliest physical depths there should seem to run a pathway which the intellect of man may climb. Haeckel has spoken, and rightly, from the standpoint of humanity; yet he continues, and with equal right, from the standpoint of the naturalist. "Notwithstanding all this, the comparative history of evolution leads us back very clearly and indubitably to the oldest and simplest source of love, to the elective affinity of two differing cells."¹

¹ Haeckel's *Evolution of Man*, Vol. II, p. 394.

SELF-SACRIFICE IN NATURE

It is not, however, in Haeckel's "elective affinity of differing cells" that we must seek the physical basis of altruism. That may be the physical basis of a passion which is frequently mis-called love; but love itself, in its true sense as self-sacrifice, love with all its beautiful elements of sympathy, tenderness, pity, and compassion, has come down a wholly different line. It is well to be clear about this at once, for the function of reproduction suggests to the biological mind a view of this factor which would limit its action to a sphere which in reality forms but the merest segment of the whole. The struggle for the life of others has certainly connected with it sex relations, as we shall see; but we can only use it scientifically, in its broad physiological sense, as literally a struggling for others, a giving up self for others. And these others are not other-sexes. They have nothing to do with sex. They are the fruits of reproduction, — the egg, the seed, the nestling, the little child. So far from its chief manifestation being within the sphere of sex, it is in the care and nurture of the young, in the provision everywhere throughout nature for the seed and egg, in the endless and infinite self-sacrifices of maternity, that altruism finds its main expression.

That this is the true reading of the work of this second factor appears even in the opening act of reproduction in the lowest plant or animal. Pledged by the first law of its being — the law of self-preservation — to sustain itself, the organism is at the same moment pledged by the second law to give up itself. Watch one of the humblest unicellular organisms at the time of reproduction. The cell, when it grows to be a certain size, divides itself into two, and each part sets up an independent life. Why it does so is now known. The protoplasm inside the cell — the body, as it were — needs continually to draw in fresh food. This is secured by a process of imbibition or osmosis through the surrounding wall. But as the cell grows large, there is not wall enough to pass in all the food the far interior needs, for while the bulk increases as the cube of the diameter, the surface increases only as the square. The bulk of the cell, in

short, has outrun the absorbing surface; its hunger has outgrown its satisfactions; and unless the cell can devise some way of gaining more surface it must starve. Hence the splitting into two smaller cells. There is now more absorbing surface than the two had when combined. When the two smaller cells have grown as large as the original parent, income and expenditure will once more balance. As growth continues, the waste begins to exceed the power of repair, and the life of the cell is again threatened. The alternatives are obvious. It must divide, or die. If it divides, what has saved its life? Self-sacrifice. By giving up its life as an individual, it has brought forth two individuals, and these will one day repeat the surrender. Here, with differences appropriate to their distinctive spheres, is the first great act of the moral life. All life, in the beginning, is self-contained, self-centered, imprisoned in a single cell. The first step to a more abundant life is to get rid of this limitation. And the first act of the prisoner is simply to break the walls of its cell. The plant does this by a mechanical or physiological process; the moral being, by a conscious act which means at once the breaking up of selfishness and the recovery of a larger self in altruism. Biologically, reproduction begins as rupture. It is the release of the cell, full fed yet unsatiated, from itself. "Except a corn of wheat fall into the ground and die, it abideth alone: but if it die, it bringeth forth much fruit."

These facts are not colored to suit a purpose. There is no other language in which science itself can state them. "Reproduction begins as rupture. Large cells, beginning to die, save their lives by sacrifice. Reproduction is literally a life saving against the approach of death. Whether it be the almost random rupture of one of the more primitive forms, such as *Schizogones*, or the overflow and separation of multiple buds, as in *Arcella*, or the dissolution of a few of the infusorians, an organism, which is becoming exhausted, saves itself and multiplies in reproducing." There is no reproduction in plant, animal, or man which does not involve self-sacrifice. All that is moral, and social, and other-regarding has come along the line of this function. Sacrifice, moreover, as these physiological facts disclose,

is not an accident, nor an accompaniment of reproduction, but an inevitable part of it. It is the universal law and the universal condition of life. The act of fertilization is the anabolic restoration, renewal, and rejuvenescence of a katabolic cell: it is a resurrection of the dead brought about by a sacrifice of the living, a dying of part of life in order to further life.

Pass from the unicellular plant to one of the higher phanerogams, and the self-sacrificing function is seen at work with still greater definiteness, for there we have a clearer contrast with the other function. To the physiologist a tree is not simply a tree but a complicated piece of apparatus for discharging, in the first place, the function of nutrition. Root, trunk, branch, twig, leaf, are so many organs—mouths, lungs, circulatory system, alimentary canal—for carrying on to the utmost perfection the struggle for life. But this is not all. There is another piece of apparatus within this apparatus of a wholly different order. It has nothing to do with nutrition. It has nothing to do with the struggle for life. It is the flower. The more its parts are studied, in spite of all homologies, the more clear it becomes that this is a construction of a unique and wonderful character. So important has this extra apparatus seemed to science, that it has named the great division of the vegetable kingdom to which this and all higher plants belong the phanerogams,—the flowering plants; and it recognizes the complexity and physiological value of this reproductive specialty by giving them the place of honor at the top of the vegetable creation. Watch this flower at work for a little, and behold a miracle! Instead of struggling for life it lays down its life. After clothing itself with a beauty which is itself the minister of unselfishness, it droops, it wastes, it lays down its life. The tree still lives; the other leaves are fresh and green; but this life within a life is dead. And why? Because within this death is life. Search among the withered petals, and there, in a cradle of cunning workmanship, are a hidden progeny of clustering seeds,—the gift to the future, which this dying mother has brought into the world at the cost of leaving it. The food she might have lived upon is given to her children, stored round each tiny embryo with lavish care, so that when

they waken into the world the first helplessness of their hunger is met. All the arrangements in plant life which concern the flower, the fruit, and the seed are the creations of the struggle for the life of others.

No one, though science is supposed to rob all the poetry from nature, reverences a flower like the biologist. He sees in its bloom the blush of the young mother; in its fading, the eternal sacrifice of maternity. A yellow primrose is not to him a yellow primrose. It is an exquisite and complex structure added on to the primrose plant for the purpose of producing other primrose plants. At the base of the flower, packed in a delicate casket, lie a number of small white objects no larger than butterflies' eggs. These are the eggs of the primrose. Into this casket, by a secret opening, filmy tubes from the pollen grains—now enticed from their hiding place on the stamens and clustered on the stigma—enter and pour their fertilizing fovilla through a microscopic gateway which opens in the wall of the egg and leads to its inmost heart. Mysterious changes then proceed. The embryo of a future primrose is born. Covered with many protective coats, it becomes a seed. The original casket swells, hardens, is transformed into a rounded capsule, opening by valves or a deftly constructed hinge. One day this capsule, crowded with seeds, breaks open and completes the cycle of reproduction by dispersing them over the ground. There, by and by, they will burst their enveloping coats, protrude their tiny radicles, and repeat the cycle of their parents' sacrificial life.

With endless variations in detail, these are the closing acts in the struggle for the life of others in the vegetable world. We have illustrated the point from plants, because this is the lowest region where biological processes can be seen in action, and it is essential to establish beyond dispute the fundamental nature of the reproductive function. From this level onwards it might be possible to trace its influence, and growing influence, throughout the whole range of the animal kingdom, until it culminates in its most consummate expression,—a human mother. Some of the links in this unbroken ascent will be filled in at a later stage, for the evolution of maternity is so wonderful and so intricate as

to deserve a treatment of its own ; but meantime we must pass on to notice a few of the other gifts which reproduction has bestowed upon the world. In a rigid sense, it is impossible to separate the gains to humanity from the reproductive function as distinguished from those of the nutritive. They are coöperators, not competitors, and their apparently rival paths continuously intertwine. But mark a few of the things that have mainly grown up around this second function, and decide whether or not it be a worthy ally of the struggle for life in the evolution of man.

To begin at the most remote circumferences, consider what the world owes to-day to the struggle for the life of others in the world of plants. This is the humblest sphere in which it can offer any gifts at all, yet these are already of such a magnitude that without them the higher world would not only be inexpressibly the poorer but could not continue to exist. As we have just seen, all the arrangements in plant life which concern the flower are the creations of the struggle for the life of others. For reproduction alone the flower is created ; when the process is over it returns to the dust. This miracle of beauty is a miracle of love. Its splendor of color, its variegations, its form, its symmetry, its perfume, its honey, its very texture, are all notes of love, — love calls or love lures or love provisions for the insect world, whose aid is needed to carry the pollen from anther to stigma, and perfect the development of its young. Yet this is but a thing thrown in, in giving something else. The flower, botanically, is the herald of the fruit. The fruit, botanically, is the cradle of the seed. Consider how great these further achievements are, how large a place in the world's history is filled by these two humble things, — the fruits and seeds of plants. Without them the struggle for life itself would almost cease. The animal struggle for life is a struggle for what ? For fruits and seeds. All animals in the long run depend for food upon fruits and seeds, or upon lesser creatures which have utilized fruits and seeds. Three fourths of the population of the world at the present moment subsist upon rice. What is rice ? It is a seed ; a product of reproduction. Of the other fourth, three fourths

live upon grains, — barley, wheat, oats, millet. What are these grains? Seeds, — stores of starch or albumen which, in the perfect forethought of reproduction, plants bequeath to their offspring. The foods of the world, especially the children's foods, are the foods of the children of plants, the foods which unselfish activities store round the cradles of the helpless, so that when the sun wakens them to their new world they may not want. Every plant in the world lives for others. It sets aside something, something costly, cared for, the highest expression of its nature. The seed is the tithe of love, the tithe which nature renders to man. When man lives upon seeds he lives upon love. Literally, scientifically, love is life. If the struggle for life has made man, braced and disciplined him, it is the struggle for love that sustains him.

Pass from the foods of man to drinks, and the gifts of reproduction once more all but exhaust the list. This may be mere coincidence, but a coincidence which involves both food and drink is at least worth noting. The first and universal food of the world is milk, — a product of reproduction. All distilled spirits are products of reproduction. All malted liquors are made from the embryos of plants. All wines are juices of the grape. Even on the plane of the animal appetites, in mere relation to man's hunger and his thirst, the factor of reproduction is thus seen to be fundamental. To interpret the course of evolution without this would be to leave the richest side even of material nature without an explanation. Retrace the ground even thus hastily traveled over, and see how full creation is of meaning, of anticipation, of good for man, how far back begins the undertone of love. Remember that nearly all the beauty of the world is love-beauty, — the corolla of the flower and the plume of the grass, the lamp of the firefly, the plumage of the bird, the horn of the stag, the face of a woman; that nearly all the music of the natural world is love-music, — the song of the nightingale, the call of the mammal, the chorus of the insect, the serenade of the lover; that nearly all the foods of the world are love foods, — the date and the raisin, the banana and the breadfruit, the locust and the honey, the eggs, the grains, the seeds, the cereals, and

the legumes ; that all the drinks of the world are love drinks, — the juices of the sprouting grain and the withered hop, the milk from the udder of the cow, the wine from the love cup of the vine. Remember that the family, the crown of all higher life, is the creation of love ; that coöperation, which means power, which means wealth, which means leisure, which therefore means art and culture, recreation and education, is the gift of love. Remember not only these things, but the diffusions of feeling which accompany them, the elevations, the ideals, the happiness, the goodness, and the faith in more goodness, and ask if it is not a world of love in which we live.

COÖPERATION IN NATURE

Though coöperation is not exclusively the gift of reproduction, it is so closely related to it that we may next observe a few of the fruits of this most definitely altruistic principle. For here is a principle, not merely a series of interesting phenomena, profoundly rooted in nature and having for its immediate purpose the establishment of otherism. In innumerable cases, doubtless, coöperation has been induced rather by the action of the struggle for life, — a striking circumstance in itself, as showing how the very selfish side of life has had to pay its debt to the larger law, — but in multitudes more it is directly allied with the struggle for the life of others.

For illustrations of the principle in general we may begin with the very dawn of life. Every life at first was a single cell. Coöperation was unknown. Each cell was self-contained and self-sufficient, and as new cells budded from the parent, they moved away and set up life for themselves. This self-sufficiency leads to nothing in evolution. Unicellular organisms may be multiplied to infinity, but the vegetable kingdom can never rise in height, or symmetry, or productiveness without some radical change. But soon we find the coöperative principle beginning its mysterious integrating work. Two, three, four, eight, ten cells club together and form a small mat, or cylinder, or ribbon, — the humblest forms of corporate plant life, — in which each individual

cell divides the responsibilities and the gains of living with the rest. The colony succeeds; grows larger; its coöperations become more close and varied. Division of labor in new directions arises for the common good; leaves are organized for nutrition, and special cells for reproduction. All the organs increase in specialization; and the time arrives when from cryptogams the plant world bursts into flowers. A flower is organized for coöperation. It is not an individual entity but a commune, a most complex social system. Sepal, petal, stamen, anther,—each has its separate rôle in the economy, each necessary to the other and to the life of the species as a whole. Mutual aid, having reached this stage, can never be arrested short of the extinction of plant life itself.

- Even after this stage, so triumphant is the success of the coöperative principle that having exhausted the possibilities of further development within the vegetable kingdom it overflowed these boundaries and carried the activities of flowers into regions which the plant world never invaded before. With a novelty and audacity unique in organic nature, the higher flowering plants, stimulated by coöperation, opened communication with two apparently forever unrelated worlds, and established alliances which secured from the subjects of these distant states a perpetual and vital service. The history of these relations forms the most entrancing chapter in botanical science. But so powerfully has this illustration of the principle appealed already to the popular imagination that it becomes a mere form to restate it. What interests us anew in these novel enterprises, nevertheless, is that they are directly connected with the reproductive struggle. For it is not for food that the plant world voyages into foreign spheres, but to perfect the supremest labor of its life.

The vegetable world is a world of still life. No higher plant has the power to move to help its neighbor, or even to help itself, at the most critical moment of its life. And it is through this very helplessness that these new coöperations are called forth. The fertilizing pollen grows on one part of the flower, the stigma which is to receive it grows on another, or it may be on a different plant. But as these parts cannot move towards one another,

the flower calls in the aid of moving things. Unconscious of their vicarious service, the butterfly and the bee, as they flit from flower to flower, or the wind as it blows across the fields, carry the fertilizing dust to the waiting stigma, and complete that act without which in a generation the species would become extinct. No flower in the world, at least no entomophilous flower, can continuously develop healthy offspring without the coöperations of an insect; and multitudes of flowers without such aid could never seed at all. It is to these coöperations that we owe all that is beautiful and fragrant in the flower world. To attract the insect and recompense it for its trouble, a banquet of honey is spread in the heart of the flower; and to enable the visitor to find the nectar, the leaves of the flower are made showy or conspicuous beyond all other leaves. To meet the case of insects which love the dusk, many flowers are colored white; for those which move about at night and cannot see at all, the night flowers load the darkness with their sweet perfume. The loveliness, the variegations of shade and tint, the ornamentations, the scents, the shapes, the sizes of flowers, are all the gifts of coöperation. The flower in every detail, in fact, is a monument to the coöperative principle.

Scarcely less singular are the coöperations among flowers themselves the better to attract the attention of the insect world. Many flowers are so small and inconspicuous that insects might not condescend to notice them. But altruism is always inventive. Instead of dispersing their tiny florets over the plant, these club together at single points, so that by the multitude of numbers an imposing show is made. Each of the associating flowers in these cases preserves its individuality, and, as we see in the elder or the hemlock, continues to grow on its own flower stalk. But in still more ingenious species the partners to a floral advertisement sacrifice their separate stems and cluster close together on a common head. The thistle, for example, is not one flower but a colony of flowers, each complete in all its parts, but all gaining the advantage of conspicuousness by densely packing themselves together. In the sunflowers and many others the sacrifice is carried still further. Of the multitude of florets clustered together

to form the mass of color, a few cease the development of the reproductive organs altogether, and allow their whole strength to go towards adding visibility to the mass. The florets in the center of the group, packed close together, are unable to do anything in this direction; but those on the margin expand the perianth into a blazing circle of flame, and leave the deep work of reproduction to those within. What are the advantages gained by all this mutual aid? That it makes them the fittest to survive. These coöperative plants are among the most numerous, most vigorous, and most widely diffused in nature. Self-sacrifice and coöperation are thus recognized as sound in principle. The blessing of nature falls upon them. The words themselves, in any more than a merely physical sense, are hopelessly out of court in any scientific interpretation of things. But the point to mark is, that on the mechanical equivalent of what afterwards come to have ethical relations natural selection places a premium. Noncoöperative or feebly coöperative organisms go to the wall. Those which give mutual aid survive and people the world with their kind. Without pausing to note the intricate coöperations of flowers which reward the eye of the specialist, — the subtle alliance with space in dioecious flowers, with time in dichogamous species, and with size in the dimorphic and trimorphic forms, — consider for a moment the extension of the principle to the seed and fruit. Helpless, single-handed, as is a higher plant, with regard to the efficient fertilizing of its flowers, an almost more difficult problem awaits it when it comes to the dispersal of its seeds. If each seed fell where it grew, the spread of the species would shortly be at an end. But nature, working on the principle of coöperation, is once more redundant in its provisions. By a series of new alliances the offspring are given a start on distant and unoccupied ground; and so perfect are the arrangements in this department of the struggle for the life of others that single plants, immovably rooted in the soil, are yet able to distribute their children over the world. By a hundred devices the fruits and seeds when ripe are intrusted to outside hands, — provided with wing or parachute and launched upon the wind, attached by cunning contrivances to bird and beast, or dropped

into stream and wave and ocean current and so transported over the earth.

If we turn to the animal kingdom, the principle of coöperation everywhere once more confronts us. It is singular that, with few exceptions, science should still know so little of the daily life of even the common animals. A few favorite mammals, some birds, three or four of the more picturesque and clever of the insects, — these almost exhaust the list of those whose ways are thoroughly known. But looking broadly at nature, one general fact is striking, — the more social animals are in overwhelming preponderance over the unsocial. Mr. Darwin's dictum, that "those communities which included the greatest number of the most sympathetic members would flourish best" is wholly proved. Run over the names of the commoner or more dominant mammals, and it will be found that they are those which have at least a measure of sociability. The cat tribe excepted, nearly all live together in herds or troops, — the elephant, for instance, the buffalo, deer, antelope, wild goat, sheep, wolf, jackal, reindeer, hippopotamus, zebra, hyena, and seal. These are *mammals*, observe, — an association of sociability in its highest developments with reproductive specialization. Cases undoubtedly exist where the sociability may not be referable primarily to this function; but in most the chief coöperations are centered in love. So advantageous are all forms of mutual service that the question may be fairly asked whether, after all, coöperation and sympathy — at first instinctive, afterwards reasoned — are not the greatest facts even in organic nature. To quote the words of Prince Kropotkin: "As soon as we study animals, — not in laboratories and museums only, but in the forest and the prairie, in the steppes and the mountains, — we at once perceive that though there is an immense amount of warfare and extermination going on amidst various species, and especially amidst various classes of animals, there is, at the same time, as much, or perhaps more, of mutual support, mutual aid, and mutual defense amidst animals belonging to the same species or, at least, to the same society. Sociability is as much a law of nature as mutual struggle. . . . If we resort to an indirect test and ask nature, 'Who are the fittest: those who are continually

at war with each other, or those who support one another?' we at once see that those animals which acquire habits of mutual aid are undoubtedly the fittest. They have more chances to survive, and they attain, in their respective classes, the highest development of intelligence and bodily organization. If the numberless facts which can be brought forward to support this view are taken into account, we may safely say that mutual aid is as much a law of animal life as mutual struggle; but that, as a factor of evolution, it most probably has a far greater importance, inasmuch as it favors the development of such habits and character as insure the maintenance and further development of the species, together with the greatest amount of welfare and enjoyment of life for the individual, with the least waste of energy."¹

In the large economy of nature, almost more than within these specific regions, the interdependence of part with part is unalterably established. The system of things, from top to bottom, is an uninterrupted series of reciprocities. Kingdom corresponds with kingdom, organic with inorganic. Thus, to carry on the larger agriculture of nature, myriads of living creatures have to be retained in the earth itself — *in* the earth — and to prepare and renew the soils in which the otherwise exhausted ground may keep up her continuous gifts of vegetation. Ages before man appeared with his tools of husbandry, these agriculturists of nature — in humid countries the worm, in subtropical regions the white ant — plowed and harrowed the earth, so that without the coöperations of these most lowly forms of life the higher beauty and fruitfulness of the world had been impossible. The very existence of animal life, to take another case of broad economy, is possible only through the mediation of the plant. No animal has the power to satisfy one single impulse of hunger without the coöperation of the vegetable world. It is one of the mysteries of organic chemistry that the chlorophyll contained in the green parts of plants, alone among substances, has the power to break up the mineral kingdom and utilize the products as food. Though detected recently in the tissues of two of the very lowest animals, chlorophyll is the peculiar possession of the vegetable

¹ *Nineteenth Century*, 1890, p. 340.

kingdom, and forms the solitary point of contact between man and all higher animals and their supply of food. Every grain of matter therefore eaten by man, every movement of the body, every stroke of work done by muscle or brain, depends upon the contribution of a plant, or of an animal which has eaten a plant. Remove the vegetable kingdom, or interrupt the flow of its unconscious benefactions, and the whole higher life of the world ends. Everything, indeed, came into being because of something else, and continues to be because of its relations to something else. The matter of the earth is built up of coöperating atoms ; it owes its existence, its motion, and its stability to coöperating stars. Plants and animals are made of coöperating cells, nations of coöperating men. Nature makes no move ; society achieves no end ; the cosmos advances not one step that is not dependent on coöperation ; and while the discords of the world disappear with growing knowledge, science only reveals with increasing clearness the universality of its reciprocities.

But to return to the more direct effects of reproduction. After creating others there lay before evolution a not less necessary task,—the task of uniting them together. To create units in indefinite quantities and scatter them over the world is not even to take one single step in progress. Before any higher evolution can take place, these units must by some means be brought into relation so as not only to act together but to react upon each other. According to well-known biological laws, it is only in combinations, whether of atoms, cells, animals, or human beings, that individual units can make any progress, and to create such combinations is in every case the first condition of development. Hence the first commandment of evolution everywhere is, "Thou shalt mass, segregate, combine, grow large." Organic evolution, as Mr. Herbert Spencer tells us, "is primarily the formation of an aggregate." No doubt the necessities of the struggle for life tended in many ways to fulfill this condition, and the organization of primitive societies, both animal and human, are largely its creation. Under its influence these were called together for mutual protection and mutual help ; and coöperations induced in this way have played an important part in evolution. But the

coöperations brought about by reproduction are at once more radical, more universal, and more efficient. The struggle for life is in part a disruptive force. The struggle for the life of others is wholly a social force. The social efforts of the first are secondary; those of the last are primary. And had it not been for the stronger and unbreakable bond which the struggle for the life of others introduced into the world the organization of societies had never even been begun. How subtly reproduction effects its purpose an illustration will make plain. And we shall select it again from the lowest world of life, so that the fundamental nature of this factor may be once more vindicated on the way.

More than two thousand years ago Herodotus observed a remarkable custom in Egypt. At a certain season of the year the Egyptians went into the desert, cut off branches from the wild palms, and, bringing them back to their gardens, waved them over the flowers of the date palm. Why they performed this ceremony they did not know; but they knew that if they neglected it, the date crop would be poor or wholly lost. Herodotus offers the quaint explanation that along with these branches there came from the desert certain flies possessed of a "vivific virtue," which somehow lent an exuberant fertility to the dates. But the true rationale of the incantation is now explained. Palm trees, like human beings, are male and female. The garden plants, the date bearers, were females, the desert plants were males; and the waving of the branches over the females meant the transference of the fertilizing pollen dust from the one to the other.

Now consider, in the far-away province of the vegetable kingdom, the strangeness of this phenomenon. Here are two trees living wholly different lives; they are separated by miles of desert sand; they are unconscious of one another's existence; and yet they are so linked together that their separation into two is a mere illusion. Physiologically they are one tree; they cannot dwell apart. It is nothing to the point that they are neither dowered with locomotion nor the power of conscious choice. The point is, that there is that in nature which unites

these seemingly disunited things, which effects combinations and coöperations where one would least believe them possible, which sustains by arrangements of the most elaborate kind inter-relations between tree and tree. By a device the most subtle of all that guard the higher evolution of the world, — the device of sex, — nature accomplishes this task of throwing irresistible bonds around widely separate things, and establishing such sympathies between them that they must act together or forfeit the very life of their kind. Sex is a paradox; it is that which separates in order to unite. The same mysterious mesh which nature threw over the two separate palms, she threw over the few and scattered units which were to form the nucleus of mankind.

Picture the state of primitive man; his fear of other primitive men; his hatred of them; his unsociability; his isolation; and think how great a thing was done by sex in merely starting the crystallization of humanity. At no period, indeed, was man ever utterly alone. There is no such thing in nature as *a man*, or for the matter of that as *an* animal, except among the very humblest forms. Wherever there is a higher animal there is another animal; wherever there is a savage there is another savage, — the other half of him, a female savage. This much, at least, sex has done for the world: it has abolished the numeral *one*. Observe, it has not simply discouraged the existence of one, it has abolished the existence of one. The solitary animal must die, and can leave no successor. Unsociableness, therefore, is banished out of the world; it has become the very condition of continued existence that there should always be a family group, or at least pair. The determination of nature to lay the foundation stone of corporate national life at this point, and to imbed sociability forever in the constitution of humanity, is only obvious when we reflect with what extraordinary thoroughness this evolution of sex was carried out. There is no instance in nature of division of labor being brought to such extreme specialization. The two sexes were not only set apart to perform different halves of the same function, but each so entirely lost the power of performing the whole function that even with so great a thing at stake as the continuance of the species *one* could not discharge it. Association,

combination, mutual help, fellowship, affection — things on which all material and moral progress would ultimately turn — were thus forced upon the world at the bayonet's point.

This hint, that the course of development is taking a social rather than an individual direction, is of immense significance. If that can be brought about by the struggle for the life of others, — and in the next chapters we shall see that it has been, — there can be no dispute about the rank of the factor which consummates it. Along the line of the physiological function of reproduction, in association with its induced activities and relations, not only has altruism entered the world, but along with it the necessary field for its expansion and full expression. If nature is to be read solely in the light of the struggle for life, these ethical anticipations — and as yet we are but at the beginning of them — for a social world and a moral life must remain the stultification both of science and of teleology.

THE ETHICAL SIGNIFICANCE OF SEX

Next among the gifts of reproduction fall to be examined some further contributions yielded by the new and extraordinary device which a moment ago leaped into prominence, — sex. The direct, and especially the collateral, issues here are of such significance that it will be essential to study them in detail. Realize the novelty and originality of this most highly specialized creation, and it will be seen at once that something of exceptional moment must lie behind it. Here is a phenomenon which stands absolutely alone on the field of nature. There is not only nothing at all like it in the world, but while everything else has homologues or analogues somewhere in the cosmos, this is without any parallel. Familiarity has so accustomed us to it that we accept the sex separation as a matter of course ; but no words can do justice to the wonder and novelty of this strange line of cleavage which cuts down to the very root of being in everything that lives.

No theme of equal importance has received less attention than this from evolutionary philosophy. The single problems which sex suggests have been investigated with a keenness and brilliance

of treatment never before brought to bear in this mysterious region; and Mr. Darwin's theory of sexual selection, whether true or false, has called attention to a multitude of things in living nature which seem to find a possible explanation here. But the broad and simple fact that this division into maleness and femaleness should run between almost every two of every plant and every animal in existence must have implications of a quite exceptional kind.

How deep, from the very dawn of life, this rent between the two sexes yawns is only now beginning to be seen. Examine one of the humblest water weeds,—the *Spirogyra*. It consists of waving threads or necklaces of cells, each plant to the eye the exact duplicate of the other. Yet externally alike as they seem, the one has the physiological value of the male, the other of the female. Though a primitive method of reproduction, the process in this case foreshadows the law of all higher vegetable life. From this point upwards, though there are many cases where reproduction is asexual, in nearly every family of plants a reproduction by spores takes place, and where it does not take place its absence is abnormal and to be accounted for by degeneration. When we reach the higher plants the differences of sex become as marked as among the higher animals. Male and female flowers grow upon separate trees, or live side by side on the same branch, yet so unlike one another in form and color that the untrained eye would never know them to be relatives. Even when male and female are grown on the same flower stalk and inclosed in a common perianth, the hermaphroditism is generally but apparent, owing to the physiological barriers of heteromorphism and dichogamy. Sex separation, indeed, is not only distinct among flowering plants but is kept up by a variety of complicated devices, and a return to hermaphroditism is prevented by the most elaborate precautions.

When we turn to the animal kingdom again the same great contrast arrests us. Half a century ago, when Balbiani described the male and female elements in microscopic infusorians, his facts were all but rejected by science. But further research has placed it beyond all doubt that the beginnings of sex are

almost synchronous with those shadowings in of life. From a state marked by a mere varying of the nuclear elements, a state which might almost be described as one antecedent to sex, the sex distinction slowly gathers definition, and passing through an infinite variety of forms, and with countless shades of emphasis, reaches at last the climax of separateness which is observed among birds and mammals. Often, even in the Metazoa, this separateness is outwardly obscured, as in starfishes and reptiles; often it is matter of common observation; while sometimes it is carried to such a pitch of specialization that only the naturalist identifies the two wholly unlike creatures as male and female. Through the whole wide field of nature, then, this gulf is fixed. Each page of the million-leaved book of species must be, as it were, split in two, the one side for the male, the other for the female. Classification naturally takes little note of this distinction; but it is fundamental. Unlikenesses between like things are more significant than unlikenesses of unlike things. And the unlikenesses between male and female are never small, and are almost always great. Though the fundamental difference is internal, the external form varies; size, color, and a multitude of more or less striking secondary characteristics separate the one from the other. Besides this, and more important than all, the cycle of a year's life is never the same for the male as for the female; they are destined from the beginning to pursue different paths, to live for different ends.

Now what does all this mean? To say that the sex distinction is necessary to sustain the existence of life in the world is no answer, since it is at least possible that life could have been kept up without it. From the facts of parthenogenesis, illustrated in bees and termites, it is now certain that reproduction can be effected without fertilization; and the circumstance that fertilization is nevertheless the rule proves this method of reproduction, though not a necessity, to be in some way beneficial to life. It is important to notice this absence of any necessity for the creation of sex—the absence of any known necessity—from the merely physiological standpoint. Is it inconceivable that nature should sometimes do things with an ulterior object,

—an ethical one, for instance? To no one with any acquaintance with nature's ways will it be possible to conceive of such a purpose as the sole purpose. In these early days when sex was instituted it was a physical universe. Undoubtedly sex then had physiological advantages; but when in a later day the ethical advantages become visible, and rise to such significance that the higher world almost wholly rests upon them, we are entitled, as viewing the world from that higher level, to have our own suspicions as to a deeper motive underlying the physical.

Apart from bare necessity, it is further remarkable that no very clear advantage of the sex distinction has yet been made out by science. Hensen and Van Beneden are able to see in conjugation no more than a *Verjüngung*, or rejuvenescence of the species. The living machinery in its wearing activities runs down and has to be wound up again; to keep life going some fresh impulse must be introduced from time to time, or the protoplasm, exhausting itself, seeks restoration in fertilization and starts afresh.¹ To Hatschek it is a remedy against the action of injurious variations; while to Weismann it is simply the source of variations. "I do not know," says the latter, "what meaning can be attributed to sexual reproduction other than the creation of hereditary individual characters to form the material on which natural selection may work. Sexual reproduction is so universal in all classes of multicellular organisms, and nature deviates so rarely from it, that it must necessarily be of pre-eminent importance. If it be true that new species are produced by processes of selection, it follows that the development of the whole organic world depends on these processes, and the part that amphigony has to play in nature, by rendering selection possible among multicellular organisms, is not only important but of the very highest imaginable importance."²

These views may be each true, and probably, in a measure, are; but the fact remains that the later psychical implications of sex are of such transcendent character as to throw all physical considerations into the shade. When we turn to these, their

¹ Geddes and Thomson, *The Evolution of Sex*, p. 163.

² *Biological Memoirs*, p. 281.

significance is as obvious as in the other case it was obscure. This will appear if we take even the most distinctively biological of these theories, — that of Weismann. Sex, to him, is the great source of variation in nature, — in plainer English, of the variety of organisms in the world. Now this variety, though not the main object of sex, is precisely what it was essential for evolution by some means to bring about. The first work of evolution always is, as we have seen, to create a mass of similar things, — atoms, cells, men, — and the second is to break up that mass into as many different kinds of things as possible. Aggregation masses the raw material, collects the clay for the potter; differentiation destroys the featureless monotonies as fast as they are formed, and gives them back in new and varied forms. Now if evolution designed, among other things, to undertake the differentiation of mankind, it could not have done it more effectively than through the device of sex. To the blending, or to the mosaics, of the different characteristics of father and mother, and of many previous fathers and mothers, under the subtle wand of heredity, all the varied interests of the human world are due. When one considers the passing on not so much of minute details of character and disposition, but of the dominant temperament and type, the new proportion in which already inextricably mingled tendencies are rearranged, and the changed environment in which, with each new generation, they must unfold, it is seen how perfect an instrument for variegating humanity lies here. Had sex done nothing more than make an interesting world, the debt of evolution to reproduction had been incalculable.

THE ETHICAL SIGNIFICANCE OF MATERNITY

But let us not be diverted from the main stream by these secondary results of the sex distinction. A far more important implication lies before us. The problem that remains for us to settle is as to how the merely physical forms of otherism began to be accompanied or overlaid by ethical characters. And the solution of this problem requires nothing more than a consideration of the broad and fundamental fact of sex itself. In what it is, and

in what it necessarily implies, we shall find the clew to the beginnings of the social and moral order of the world. For, rising on the one hand out of maleness and on the other hand out of femaleness, developments take place of such a kind as to constitute this the turning-point of the world's moral history. Let it be said at once that these developments are not to be sought for in the direction in which, from the nature of the factors, one might hastily suppose that they lay. What seems to be imminent at this stage, and as the natural end to which all has led up, is the institution of affection in definite forms between male and female. But we are on a very different track. Affection between male and female is a later, less fundamental, and, in its beginnings, less essential growth; and long prior to its existence, and largely the condition of it, is the even more beautiful development whose progress we have now to trace. The basis of this new development is indeed far removed from the mutual relations of sex with sex. For it lies in maleness and femaleness themselves, in their inmost quality and essential nature, in what they lead to and what they become. The superstructure certainly owes much to the psychical relations of father and mother, husband and wife; but the evolution of love began ages before these were established.

What exactly maleness is, and what femaleness, has been one of the problems of the world. At least five hundred theories of their origin are already in the field, but the solution seems to have baffled every approach. Sex has remained almost to the present hour an ultimate mystery of creation, and men seem to know as little what it is as whence it came. But among the last words of modern science there are one or two which spell out a partial clew to both of these mysterious problems. The method by which this has been reached is almost for the first time a purely biological one, and if its inferences are still uncertain, it has at least established some important facts.

Starting with the function of nutrition as the nearest ally of reproduction, the newer experimenters have discovered cases in which sex apparently has been determined by the quantity and quality of the food supply. And in actual practice it has been found possible, in the case of certain organisms, to produce either

maleness or femaleness by simply varying their nutrition,—femaleness being an accompaniment of abundant food, maleness of the reverse. When Yung, to take an authentic experiment, began his observations on tadpoles, he ascertained that in the ordinary natural condition the number of males and females produced was not far from equal,—the percentage being about fifty-seven females to forty-three males, thus giving the females a preponderance of seven. But when a brood of tadpoles was sumptuously fed the percentage of females rose to seventy-eight, and when a second brood was treated even more liberally the number amounted to eighty-one. In a third experiment with a still more highly nutritious diet, the result of the high feeding was more remarkable, for in this case ninety-two females were produced and only eight males. In the case of butterflies and moths, it has been found that if caterpillars are starved before entering the chrysalis state the offspring are males, while others of the same brood, when highly nourished, develop into females. A still more instructive case is that of the aphides, the familiar plant lice of our gardens. During the warmth of summer, when food is abundant, these insects produce parthenogenetically nothing but females, while in the famines of later autumn they give birth to males. In striking confirmation of this fact it has been proved that in a conservatory where the aphides enjoy perpetual summer, the parthenogenetic succession of females continued to go on for four years and stopped only when the temperature was lowered and food diminished. Then males were at once produced.¹ It will no longer be said that science is making no progress with this unique problem when it is apparently able to determine sex by turning off or on the steam in a greenhouse. With regard to bees, the relation between nutrition and sex seems equally established. "The three kinds of inmates in a beehive are known to every one as queens, workers, and drones; or, as fertile females, imperfect females, and males. What are the factors determining the differences between these three forms? In the first place, it is believed that the eggs which give rise to drones are not fertilized, while those that develop into queens

¹ The Evolution of Sex, pp. 41-46.

and workers have the normal history. But what fate rules the destiny of the two latter, determining whether a given ovum will turn out the possible mother of a new generation, or remain at the lower level of a nonfertile working female? It seems certain that the fate mainly lies in the quantity and quality of the food. Royal diet, and plenty of it, develops the future queens. . . . Up to a certain point the nurse bees can determine the future destiny of their charge by changing the diet, and this in some cases is certainly done. If a larva on the way to become a worker receive by chance some crumbs from the royal superfluity, the reproductive function may develop, and what are called 'fertile workers,' to a certain degree above the average abortiveness, result; or, by direct intention, a worker grub may be reared into a queen bee."¹

It is unnecessary to prolong the illustration, for the point it is wished to emphasize is all but in sight. As we have just witnessed, the tendency of abundant nutrition is to produce females, while defective nutritive conditions produce males. This means that in so far as nutrition reacts on the bodies of animals—and nothing does so more—there will be a growing difference, as time begins to accumulate the effects, between the organization and life habit of male and female respectively. In the male, destructive processes, a preponderance of waste over repair, will prevail; the result will be a katabolic habit of body; in the female, the constructive processes will be in the ascendant, occasioning an opposite or anabolic habit. Translated in less technical language, this means that the predominating note in the male will be energy, motion, activity; while passivity, gentleness, repose, will characterize the female. These words, let it be noticed, psychical though they seem, are yet here the coinages of physiology. No other terms indeed would describe the difference. Thus Geddes and Thomson: "The female cochineal insect, laden with reserve products in the form of the well-known pigment, spends much of its life like a mere quiescent gall on the cactus plant. The male, on the other hand, in his adult state, is agile, restless, and short-lived. Now this is no mere curiosity of

¹ *The Evolution of Sex*, p. 42.

the entomologist, but in reality a vivid emblem of what is an average truth throughout the world of animals, — the preponderating passivity of the females, the freedom and activity of the males." Rolph's words, because he writes neither of men nor of animals, but goes back to the furthest recess of nature and characterizes the cell itself, are still more significant: "The less nutritive and therefore smaller, hungrier, and more mobile organism is the male; the more nutritive and usually more quiescent is the female."

Now what do these facts indicate? They indicate that maleness is one thing and femaleness another, and that each has been specialized from the beginning to play a separate rôle in the drama of life. Among primitive peoples, as largely in modern times, "The tasks which demand a powerful development of muscle and bone, and the resulting capacity for intermittent spurts of energy, involving corresponding periods of rest, fall to the man; the care of the children and all the various industries which radiate from the hearth, and which call for an expenditure of energy more continuous, but at a lower tension, fall to the woman."¹ Whether this or any theory of the origin of sex be proved or unproved, the fact remains, and is everywhere emphasized in nature, that a certain constitutional difference exists between male and female, — a difference inclining the one to a robuster life and implanting in the other a certain mysterious bias in the direction of what one can only call the womanly disposition.

On one side of the great line of cleavage have grown up men, — those whose lives for generations and generations have been busied with one particular set of occupations; on the other side have lived and developed women, — those who for generations have been busied with another and a widely different set of occupations. And as occupations have inevitable reactions upon mind, character, and disposition, these two have slowly become different in mind and character and disposition. That cleavage, therefore, which began in the merely physical region is now seen to extend into the psychical realm, and ends by supplying the world with

¹ Havelock Ellis, *Man and Woman*, p. 2.

two great and forever separate types. No efforts, or explanations, or expostulations can ever break down that distinction between maleness and femaleness, or make it possible to believe that they were not destined from the first of time to play a different part in human history. Male and female never have been and never will be the same. They are different in origin; they have traveled to their destinations by different routes; they have had different ends in view. The result is, that they are different, and the contribution, therefore, of each to the evolution of the human race is special and unique. By and by it will be our duty to mark what man, in virtue of his peculiar gift, has done for the world; part indeed of his contribution has been already recorded here. To him has been mainly assigned the fulfillment of the first great function, — the struggle for life. Woman, whose higher contribution has not yet been named, is the chosen instrument for carrying on the struggle for the life of others. Man's life, on the whole, is determined chiefly by the function of nutrition; woman's, by the function of reproduction. Man satisfies the one by going out into the world, and in the rivalries of war and the ardors of the chase, in conflict with nature, and amid the stress of industrial pursuits, fulfilling the law of self-preservation; woman completes her destiny by occupying herself with the industries and sanctities of the home, and paying the debt of motherhood to her race.

Now out of this initial difference — so slight at first as to amount to no more than a scarcely perceptible bias — have sprung the most momentous issues. For by every detail of their separate careers the two original tendencies — to outward activity in the man; to inward activity, miscalled passivity, in the woman — became accentuated as time went on. The one life tended towards selfishness, the other towards unselfishness. While one kept individualism alive, the other kept altruism alive. Blended in the children, these two master principles from this their starting point acted and reacted all through history, seeking that mean in which true life lies. Thus, by a division of labor appointed by the will of nature, the conditions for the ascent of man were laid.

But by far the most vital point remains. For we have next to observe how this bears directly on the theme we set out to explore, — the evolution of love. The passage from mere otherism, in the physiological sense, to altruism in the moral sense, occurs in connection with the due performance of her natural task by her to whom the struggle for the life of others is assigned. That task, translated into one great word, is maternity, which is nothing but the struggle for the life of others transfigured, transferred to the moral sphere. Focused in a single human being, this function, as we rise in history, slowly begins to be accompanied by those heaven-born psychical states which transform the femaleness of the older order into the motherhood of the new. When one follows maternity out of the depths of lower nature, and beholds it ripening in quality as it reaches the human sphere, its character, and the character of the processes by which it is evolved, appear in their full divinity. For of what is maternity the mother? Of children? No; for these are the mere vehicle of its spiritual manifestation. Of affection between female and male? No; for that, contrary to accepted beliefs, has little to do in the first instance with sex relations. Of what, then? Of love itself, of love as love, of love as life, of love as humanity, of love as the pure and undefiled fountain of all that is eternal in the world. In the long stillness which follows the crisis of maternity, witnessed only by the new and helpless life which is at once the last expression of the older function and the unconscious vehicle of the new, humanity is born. By an alchemy which remains, and must ever remain, the secret of nature, the physiological forces give place to those higher principles of sympathy, solicitude, and affection which from this time onwards are to change the course of evolution and determine a diviner destiny for a human race:

Earth's insufficiency
 Here grows to event;
 The indescribable
 Here it is done;
 The woman-soul leadeth us
 Upward and on.

So stupendous is this transition that the mere possibility staggers us. Separated by the whole diameter of conscious intelligence and will, what possible affinities can exist between the reproductive and the altruistic process? What analogy can ever exist between the earlier physiological struggle for the life of others and the later struggle of love? Yet, different though their accompaniments may be, when closely examined they are seen at every essential point running parallel with each other. The object in either case is to continue the life of the species; the essence of both is self-sacrifice; the first manifestation of the sacrifice is to make provision for others by helping them to draw the first few breaths of life. But what has love to do with species? Can altruism have reference to mere life? The answer is, that in its first beginnings it has almost nothing to do with anything else. For consider the situation. Reproduction, let us suppose, has done its most perfect work on the physiological plane: the result is, that a human child is born into the world. But the work of reproduction being to struggle for the life of the species, its task is only complete when it secures that the child, representing the species, shall live. If the child dies, reproduction has failed; the species, so far as this effort is concerned, comes to an end. Now can reproduction as a merely physiological function complete this process? It cannot. What can? Only the mother's care and love. Without these, in a few hours or days, the new life must perish; the earlier achievement of reproduction is in vain. Hence there comes a moment when these two functions meet, when they act as complements to each other; when physiology hands over its unfinished task to ethics; when evolution — if for once one may use a false distinction — depends upon the "moral" process to complete the work the "cosmic" process has begun.

At what precise stage of the ascent, in association with what class of animals, otherism began to shade into altruism in the ethical sense is immaterial. Whether the altruism in the early stages is real or apparent, profound or superficial, voluntary or automatic, does not concern us. What concerns us is that the altruism is there; that the day came when, even though a

rudiment, it was a reality ; above all, that the arrangements for introducing and perfecting it were realities. The prototype, for ages, may have extended only to form, to the outward relation ; for further ages no more altruism may have existed than was absolutely necessary to the preservation of the species. But to fix the eye upon it at that remote stage and assert that because it was apparently then automatic it must therefore have been automatic ever after is to forget the progressive character of evolution as well as to ignore facts. While many of the apparent other-regarding acts among animals are purely selfish and purely automatic, undoubtedly there are instances where more is involved. Apart from their own offspring, in relation to which there may always be the suspicion of automatism ; and apart from domestic animals, which are open to the further suspicion of having been trained to it, — animals act spontaneously towards other animals ; they have their playmates ; they make friendships and very attached friendships. Much more, indeed, has been claimed for them ; but it is not necessary to claim even this much. No evolutionist would expect among animals — domestic animals always excepted — any considerable development of altruism, because the physiological and psychical conditions which directly led to its development in man's case were fulfilled in no other creature.

Simple as seems the method by which the first few sparks of love were nursed into flame in the bosom of maternity, the details of the evolution are so intricate as to require a chapter to themselves. But the emphasis which nature puts on this process may be judged of by the fact that one half the human race had to be set apart to sustain and perfect it. To the evolutionist who discerns the true proportions of the forces which made for the ascent of man, one of the two or three great events in the natural history of the world was the institution of sex. It is here that the master forces which were to dominate the latest and highest stages of the process start ; here, specialized into egoism and altruism, they part ; and here, each having run its different course, they meet to distribute their gains to a succeeding race. With the initial impulses of their sex strengthened by the different life routine to which each led, these two forces ran their

course through history, determining by their ceaseless reactions the order and progress of the world, or, when wrongly balanced, its disorder and decay. According to evolutionary philosophy there are three great marks or necessities of all true development, — aggregation, or the massing of things; differentiation, or the varying of things; and integration, or the reuniting of things into higher wholes. All these processes are brought about by sex more perfectly than by any other factor known. From a careful study of this one phenomenon, science could almost decide that progress was the object of nature, and that altruism was the object of progress.

This vital relation between altruism in its early stages and physiological ends neither implies that it is to be limited by these ends nor defined in terms of them. Everything must begin somewhere. And there is no aphorism which the labors of evolution, at each fresh beginning, have tended more consistently to indorse than "first that which is natural, then that which is spiritual." How this great saying also disposes of the difficulty, which appears and reappears with every forward step in evolution, as to the qualitative terms in which higher developments are to be judged, is plain. Because the spiritual to our vision emerges from the natural, or, to speak more accurately, is conveyed upwards by the natural for the first stretches of its ascent, it is not necessarily contained in that natural, nor is it to be defined in terms of it. What comes "first" is not the criterion of what comes last. Few things are more forgotten in criticism of evolution than that the nature of a thing is not dependent on its origin, that one's whole view of a long, growing, and culminating process is not to be governed by the first sight the microscope can catch of it. The processes of evolution evolve as well as the products, — evolve with the products. In the environments they help to create, or to make available, they find a field for new creations as well as further reinforcements for themselves. With the creation of human children altruism found an area for its own expansion such as had never before existed in the world. In this new soil it grew from more to more, and reached a potentiality which enabled it to burst the trammels of

physical conditions, and overflow the world as a moral force. The mere fact that the first uses of love were physical shows how perfectly this process bears the stamp of evolution. The latter function is seen to relieve the earlier at the moment when it would break down without it, and continue the ascent without a pause.

If it be hinted that nature has succeeded in continuing the ascent of life in animals without any reënforcement from psychological principles, the first answer is, that owing to physiological conditions this would not have been possible in the case of man. But even among animals it is not true that reproduction completes its work apart from higher principles, for even there, there are accompaniments, continually increasing in definiteness, which at least represent the instincts and emotions of man. It is no doubt true that in animals the affections are less voluntarily directed than in the case of a human mother. But in either case they must have been involuntary at first. It can only have been at a late stage in evolution that nature could trust even her highest product to carry on the process by herself. Before altruism was strong enough to take its own initiative, necessity had to be laid upon all mothers, animal and human, to act in the way required. In part physiological, this necessity was brought about under the ordinary action of that principle which had to take charge of everything in nature until the will of man appeared, — natural selection. A mother who did not care for her children would have feeble and sickly children. Their children's children would be feeble and sickly children.¹ And the day of reckoning would come when they would be driven off the field by a hardier, that is a better mothered, race. Hence the premium of nature upon better mothers. Hence the elimination of all the reproductive failures, of all the mothers who fell short of completing the process to the last detail. And hence, by the law of the survival of the fittest, altruism, which at this stage means good motherism, is forced upon the world.

This consummation reached, the foundations of the human world are finished. Nothing foreign remains to be added. All

¹ This seems contrary to the views of Weismann.

that need happen henceforth is that the struggle for the life of others should work out its destiny. To follow out the gains of reproduction from this point would be to write the story of the nations, the history of civilization, the progress of social evolution. The key to all these processes is here. There is no intelligible account of the world which is not founded on the realization of the place of this factor in development. Sociology, practically, can only beat the air, can make no step forward as a science, until it recognizes this basis in biology. It is the failure not so much to recognize the supremacy of this second factor, but to see that there is any second factor at all, that has vitiated almost every attempt to construct a symmetrical social philosophy. It has long, indeed, been perceived that society is an organism, and an organism which has grown by natural growth like a tree. But the tree to which it is usually likened is such a tree as never grew on this earth. For it is a tree without flowers; a tree with nothing but a stem and leaves; a tree that performed the function of nutrition, and forgot all about reproduction. The great unrecognized truth of social science is that the social organism has grown and flowered and fruited in virtue of the continuous activities and interrelations of the two correlated functions of nutrition and reproduction; that these two dominants being at work, it could not but grow, and grow in the way it has grown. When the dual nature of the evolving forces is perceived; when their reactions upon one another are understood; when the changed material with which they have to work from time to time, the further obstacles confronting them at every stage, the new environments which modify their action as the centuries add their growths and disencumber them of their withered leaves, — when all this is observed, the whole social order falls into line. From the dawn of life these two forces have acted together, one continually separating, the other continually uniting; one continually looking to its own things, the other to the things of others. Both are great in nature, — but “the greatest of these is love.”

XXV

INFLUENCES THAT AFFECT THE NATURAL ABILITY OF NATIONS¹

It seems to me most essential to the well-being of future generations that the average standard of ability of the present time should be raised. Civilization is a new condition imposed upon man by the course of events, just as in the history of geological changes new conditions have continually been imposed on different races of animals. They have had the effect either of modifying the nature of the races through the process of natural selection whenever the changes were sufficiently slow and the race sufficiently pliant, or of destroying them altogether when the changes were too abrupt or the race unyielding. The number of the races of mankind that have been entirely destroyed under the pressure of the requirements of an incoming civilization reads us a terrible lesson. Probably in no former period of the world has the destruction of the races of any animal whatever been effected over such wide areas and with such startling rapidity as in the case of savage man. In the North American continent, in the West Indian Islands, in the Cape of Good Hope, in Australia, New Zealand, and Van Diemen's Land, the human denizens of vast regions have been entirely swept away in the short space of three centuries, less by the pressure of a stronger race than through the influence of a civilization they were incapable of supporting. And we, too, the foremost laborers in creating this civilization, are beginning to show ourselves incapable of keeping pace with our own work. The needs of centralization, communication, and culture call for more brains and mental stamina than the average of our race possess. We are in crying want for a greater fund of ability in all stations of life ; for neither the classes of

¹ From *Hereditary Genius*, by Francis Galton, pp. 332-348, Macmillan & Co., New York, 1892.

statesmen, philosophers, artisans, nor laborers are up to the modern complexity of their several professions. An extended civilization like ours comprises more interests than the ordinary statesmen or philosophers of our present race are capable of dealing with, and it exacts more intelligent work than our ordinary artisans and laborers are capable of performing. Our race is overweighted, and appears likely to be drudged into degeneracy by demands that exceed its powers. If its average ability were raised a grade or two, our new classes F and G would conduct the complex affairs of the state at home and abroad as easily as our present F and G, when in the position of country squires, are able to manage the affairs of their establishments and tenantry. All other classes of the community would be similarly promoted to the level of the work required by the nineteenth century, if the average standard of the race were raised.

When the severity of the struggle for existence is not too great for the powers of the race, its action is healthy and conservative, otherwise it is deadly, just as we may see exemplified in the scanty, wretched vegetation that leads a precarious existence near the summer snow line of the Alps, and disappears altogether a little higher up. We want as much backbone as we can get, to bear the racket to which we are henceforth to be exposed, and as good brains as possible to contrive machinery, for modern life to work more smoothly than at present. We can, in some degree, raise the nature of a man to a level with the new conditions imposed upon his existence, and we can also, in some degree, modify the conditions to suit his nature. It is clearly right that both these powers should be exerted, with the view of bringing his nature and the conditions of his existence into as close harmony as possible.

In proportion as the world becomes filled with mankind, the relations of society necessarily increase in complexity, and the nomadic disposition found in most barbarians becomes unsuitable to the novel conditions. There is a most unusual unanimity in respect to the causes of incapacity of savages for civilization, among writers on those hunting and migratory nations which are

brought into contact with advancing colonization, and perish, as they invariably do, by the contact. They tell us that the labor of such men is neither constant nor steady; that the love of a wandering, independent life prevents their settling anywhere to work, except for a short time, when urged by want and encouraged by kind treatment. Meadows says that the Chinese call the barbarous races on their borders by a phrase which means "hither and thither, not fixed." And any amount of evidence might be adduced to show how deeply Bohemian habits of one kind or another were ingrained in the nature of the men who inhabited most parts of the earth now overspread by the Anglo-Saxon and other civilized races. Luckily there is still room for adventure, and a man who feels the cravings of a roving, adventurous spirit to be too strong for resistance may yet find a legitimate outlet for it in the colonies, in the army, or on board ship. But such a spirit is, on the whole, an heirloom that brings more impatient restlessness and beating of the wings against cage bars than persons of more civilized characters can readily comprehend, and it is directly at war with the more modern portion of our moral natures. If a man be purely a nomad, he has only to be nomadic, and his instinct is satisfied; but no Englishmen of the nineteenth century are purely nomadic. The most so among them have also inherited many civilized cravings that are necessarily starved when they become wanderers, in the same way as the wandering instincts are starved when they are settled at home. Consequently their nature has opposite wants, which can never be satisfied except by chance, through some very exceptional turn of circumstances. This is a serious calamity, and as the Bohemianism in the nature of our race is destined to perish, the sooner it goes the happier for mankind. The social requirements of English life are steadily destroying it. No man who only works by fits and starts is able to obtain his living nowadays; for he has not a chance of thriving in competition with steady workmen. If his nature revolts against the monotony of daily labor, he is tempted to the public house, to intemperance, and, it may be, to poaching, and to much more serious crime; otherwise he banishes himself

from our shores. In the first case, he is unlikely to leave as many children as men of more domestic and marrying habits, and, in the second case, his breed is wholly lost to England. By this steady riddance of the Bohemian spirit of our race, the artisan part of our population is slowly becoming bred to its duties, and the primary qualities of the typical modern British workman are already the very opposite of those of the nomad. What they are now was well described by Mr. Chadwick as consisting of "great bodily strength, applied under the command of a steady, persevering will, mental self-contentedness, impassibility to external irrelevant impressions, which carries them through the continued repetition of toilsome labor, 'steady as time.'"

It is curious to remark how unimportant to modern civilization has become the once famous and thoroughbred looking Norman. The type of his features, which is, probably, in some degree correlated with his peculiar form of adventurous disposition, is no longer characteristic of our rulers, and is rarely found among celebrities of the present day; it is more often met with among the undistinguished members of highly born families, and especially among the less conspicuous officers of the army. Modern leading men in all paths of eminence, as may easily be seen in a collection of photographs, are of a coarser and more robust breed; less excitable and dashing, but endowed with far more ruggedness and real vigor. Such also is the case as regards the German portion of the Austrian nation; they are far more high caste in appearance than the Prussians, who are so plain that it is disagreeable to travel northwards from Vienna and watch the change; yet the Prussians appear possessed of the greater moral and physical stamina.

Much more alien to the genius of an enlightened civilization than the nomadic habit is the impulsive and uncontrolled nature of the savage. A civilized man must bear and forbear; he must keep before his mind the claims of the morrow as clearly as those of the passing minute; of the absent, as well as of the present. This is the most trying of the new conditions imposed on man by civilization, and the one that makes it hopeless for

any but exceptional natures among savages to live under them. The instinct of a savage is admirably consonant with the needs of savage life; every day he is in danger through transient causes; he lives from hand to mouth, in the hour and for the hour, without care for the past or forethought for the future; but such an instinct is utterly at fault in civilized life. The half-reclaimed savage, being unable to deal with more subjects of consideration than are directly before him, is continually doing acts through mere maladroitness and incapacity, at which he is afterwards deeply grieved and annoyed. The nearer inducements always seem to him, through his uncorrected sense of moral perspective, to be incomparably larger than others of the same actual size, but more remote; consequently, when the temptation of the moment has been yielded to and passed away, and its bitter result comes in its turn before the man, he is amazed and remorseful at his past weakness. It seems incredible that he should have done that yesterday which to-day seems so silly, so unjust, and so unkind. The newly reclaimed barbarian, with the impulsive, unstable nature of the savage, when he also chances to be gifted with a peculiarly generous and affectionate disposition, is of all others the man most oppressed with the sense of sin.

Now it is a just assertion, and a common theme of moralists of many creeds, that man, such as we find him, is born with an imperfect nature. He has lofty aspirations, but there is a weakness in his disposition which incapacitates him from carrying his nobler purposes into effect. He sees that some particular course of action is his duty and should be his delight; but his inclinations are fickle and base, and do not conform to his better judgment. The whole moral nature of man is tainted with sin, which prevents him from doing the things he knows to be right.

The explanation I offer of this apparent anomaly seems perfectly satisfactory from a scientific point of view. It is neither more nor less than that the development of our nature, whether under Darwin's law of natural selection, or through the effects of changed ancestral habits, has not kept pace with the

development of our moral civilization. Man was barbarous but yesterday, and therefore it is not to be expected that the natural aptitudes of his race should already have become molded into accordance with his very recent advance. We, men of the present centuries, are like animals suddenly transplanted among new conditions of climate and of food: our instincts fail us under the altered circumstances.

My theory is confirmed by the fact that the members of old civilizations are far less sensible than recent converts from barbarism of their nature being inadequate to their moral needs. The conscience of a negro is aghast at his own wild, impulsive nature, and is easily stirred by a preacher, but it is scarcely possible to ruffle the self-complacency of a steady-going Chinaman.

The sense of original sin would show, according to my theory, not that man was fallen from a high estate, but that he was rising in moral culture with more rapidity than the nature of his race could follow. My view is corroborated by the conclusion reached at the end of each of the many independent lines of ethnological research, — that the human race were utter savages in the beginning; and that, after myriads of years of barbarism, man has but very recently found his way into the paths of morality and civilization.

Before speaking of the influences which affect the natural ability and intelligence of nations and races, I must beg the reader to bring distinctly before his mind how reasonable it is that such influences should be expected to exist. How consonant it is to all analogy and experience to expect that the control of the nature of future generations should be as much within the power of the living as the health and well-being of the individual is in the power of the guardians of his youth.

We are exceedingly ignorant of the reasons why we exist, confident only that individual life is a portion of some vaster system that struggles arduously onwards towards ends that are dimly seen or wholly unknown to us, by means of the various affinities — the sentiments, the intelligences, the tastes, the appetites — of innumerable personalities who ceaselessly succeed one another on the stage of existence.

There is nothing that appears to assign a more exceptional or sacred character to a race than to the families or individuals that compose it. We know how careless nature is of the lives of individuals; we have seen how careless she is of eminent families, — how they are built up, flourish, and decay: just the same may be said of races, and of the world itself; also, by analogy, of other scenes of existence than this particular planet of one of innumerable suns. Our world appears hitherto to have developed itself, mainly, under the influence of unreasoning affinities; but of late, man, slowly growing to be intelligent, humane, and capable, has appeared on the scene of life and profoundly modified its conditions. He has already become able to look after his own interests in an incomparably more far-sighted manner than in the old prehistoric days of barbarism and flint knives; he is already able to act on the experiences of the past, to combine closely with distant allies, and to prepare for future wants, known only through the intelligence, long before their pressure has become felt. He has introduced a vast deal of civilization and hygiene which influence, in an immense degree, his own well-being and that of his children; it remains for him to bring other policies into action that shall tell on the natural gifts of his race.

It would be writing to no practically useful purpose, were I to discuss the effect that might be produced on the population by such social arrangements as existed in Sparta. They are so alien and repulsive to modern feelings that it is useless to say anything about them, so I shall wholly confine my remarks to agencies that are actually at work, and upon which there can be no hesitation in speaking.

I shall have occasion to show that certain influences retard the average age of marriage, while others hasten it; and the general character of my argument will be to prove that an enormous effect upon the average natural ability of a race may be produced by means of those influences. I shall argue that the wisest policy is that which results in retarding the average age of marriage among the weak, and in hastening it among the vigorous classes; whereas, most unhappily for us, the influence of

numerous social agencies has been strongly and banefully exerted in the precisely opposite direction.

An estimate of the effect of the average age of marriage on the growth of any section of a nation is therefore the first subject that requires investigation. Everybody is prepared to admit that it is an element, sure to produce some sensible effect, but few will anticipate its real magnitude, or will be disposed to believe that its results have so vast and irresistible an influence on the natural ability of a race as I shall be able to demonstrate.

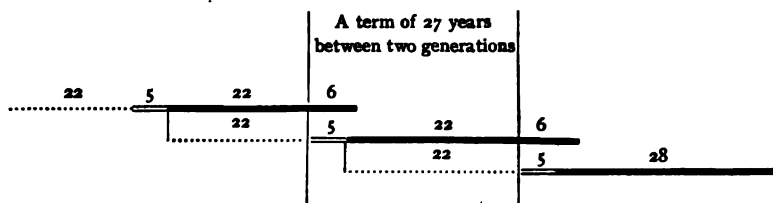
The average age of marriage affects population in a three-fold manner. Firstly, those who marry when young have the larger families; secondly, they produce more generations within a given period, and therefore the growth of a prolific race, progressing as it does, "geometrically," would be vastly increased at the end of a long period by a habit of early marriages; and thirdly, more generations are alive at the same time among those races who marry when they are young.

In explanation of the aggregate effect of these three influences, it will be best to take two examples that are widely but not extremely separated. Suppose two men, M and N, about 22 years old, each of them having therefore the expectation of living to the age of 55, or 33 years longer; and suppose that M marries at once, and that his descendants when they arrive at the same age do the same; but that N delays until he has laid by money, and does not marry before he is 33 years old, that is to say, 11 years later than M, and his descendants also follow his example. Let us further make the two very moderate suppositions, that the early marriages of race M result in an increase of $1\frac{1}{2}$ in the next generation, and also in the production of $3\frac{3}{4}$ generations in a century, while the late marriages of race N result in an increase of only $1\frac{1}{4}$ in the next generation, and in $2\frac{1}{2}$ generations in one century.

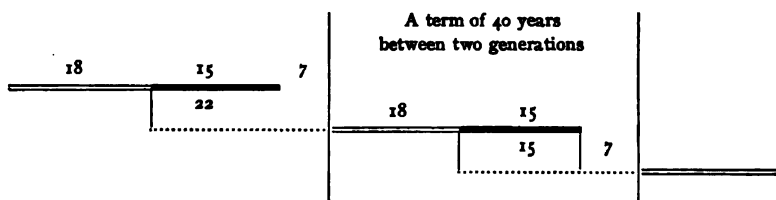
It will be found that an increase of $1\frac{1}{2}$ in each generation, accumulating on the principle of compound interest during $3\frac{3}{4}$ generations, becomes rather more than $1\frac{1}{4}$ times the original amount; while an increase of $1\frac{1}{4}$ for $2\frac{1}{2}$ generations is barely as much as $\frac{1}{2}$ times the original amount. Consequently the increase

of the race of M at the end of a century will be greater than that of N in the ratio of 18 to 7; that is to say, it will be rather more than $2\frac{1}{2}$ times as great. In two centuries the progeny of M will be more than 6 times, and in three centuries more than 15 times, as numerous as those of N.

The proportion which the progeny of M will bear at any time to the total living population will be still greater than this, owing to the number of generations of M who are alive at the same time being greater than those of N. The reader will not find any difficulty in estimating the effect of these conditions, if he begins by ignoring children and all others below the age of 22, and also by supposing the population to be stationary in its number, in consecutive generations. We have agreed in the case of M to allow $3\frac{1}{4}$ generations to one century, which gives about 27 years to each generation; then, when one of this race is 22 years old, his father will (on the average of many cases) be 27 years older, or 49; and as the father lives to 55, he will survive the advent of his son to manhood for the space of 6 years. Consequently, during the 27 years intervening between each two generations, there will be found one mature life for the whole period and one other mature life during a period of 6 years, which gives for the total mature life of the race M a number which may be expressed by the fraction $\frac{6+22}{27}$, or $\frac{28}{27}$. The diagram represents the course of three consecutive generations of race M: the middle line refers to that of the individual about whom I have just been speaking, the upper one to that of his father, and the lower to his son. The dotted line indicates the period of life before the age of 22; the double line, the period between 22 and the average time at which his son is born; the dark line is the remainder of his life.



On the other hand, a man of the race N, which does not contribute more than $2\frac{1}{2}$ generations to a century, that is to say, 40 years to a single generation, does not attain the age of 22 until (on the average of many cases) 7 years after his father's death; for the father was 40 years old when his son was born, and died at the age of 55 when the son was only 15 years old. In other words, during each period of $18 + 15 + 7$, or 40, years men of mature life of the race N are alive for only $18 + 15$, or 33 of them; hence the total mature life of the race N may be expressed by the fraction $\frac{33}{40}$.



It follows that the relative population due to the races of M and N is as $\frac{33}{40}$ to $\frac{33}{40}$, or as 40 to 27, which is very nearly as 5 to 3.¹

We have been calculating on the supposition that the population remains stationary, because it was more convenient to do so, but the results of our calculation will hold nearly true for all cases. Because, if population should increase, the larger number of living descendants tends to counterbalance the diminished number of living ancestry; and conversely, if it decreases.

Combining the above ratio of 5 to 3 with those previously obtained, it results that at the end of one century from the time when the races M and N started fair, with equal numbers, the proportion of mature men of race M will be four times as numerous as those of race N; at the end of two centuries they will be ten times as numerous, and at the end of three centuries no less than twenty-six times as numerous.

¹ A little consideration of the diagram will show that the proportion in question will invariably be in the inverse ratio of the intervals between the two generations, which in the present case are 27 and 40 years.

I trust the reader will realize the heavy doom which these figures pronounce against all subsections of prolific races in which it is the custom to put off the period of marriage until middle age. It is a maxim of Malthus that the period of marriage ought to be delayed in order that the earth may not be overcrowded by a population for whom there is no place at the great table of nature. If this doctrine influenced all classes alike, I should have nothing to say about it here, one way or another, for it would hardly affect the discussions in this book¹; but, as it is put forward as a rule of conduct for the prudent part of mankind to follow, whilst the imprudent are necessarily left free to disregard it, I have no hesitation in saying that it is a most pernicious rule of conduct in its bearing upon race. Its effect would be such as to cause the race of the prudent to fall, after a few centuries, into an almost incredible inferiority of numbers to that of the imprudent, and it is therefore calculated to bring utter ruin upon the breed of any country where the doctrine prevailed. I protest against the abler races being encouraged to withdraw in this way from the struggle for existence. It may seem monstrous that the weak should be crowded out by the strong, but it is still more monstrous that the races best fitted to play their part on the stage of life should be crowded out by the incompetent, the ailing, and the desponding.

The time may hereafter arrive, in far distant years, when the population of the earth shall be kept as strictly within the bounds of number and suitability of race as the sheep on a well-ordered moor or the plants in an orchard house; in the meantime, let us do what we can to encourage the multiplication of the races best fitted to invent and conform to a high and generous civilization, and not, out of a mistaken instinct of giving support to the weak, prevent the incoming of strong and hearty individuals.

The long period of the dark ages under which Europe has lain is due, I believe, in a very considerable degree, to the celibacy enjoined by religious orders on their votaries. Whenever a man or woman was possessed of a gentle nature that fitted him or her to deeds of charity, to meditation, to literature, or to

¹ Galton's *Hereditary Genius*.

art, the social condition of the time was such that they had no refuge elsewhere than in the bosom of the church. But the church chose to preach and exact celibacy. The consequence was that these gentle natures had no continuance, and thus, by a policy so singularly unwise and suicidal that I am hardly able to speak of it without impatience, the church brutalized the breed of our forefathers. She acted precisely as if she had aimed at selecting the rudest portion of the community to be, alone, the parents of future generations. She practiced the arts which breeders would use who aimed at creating ferocious, currish, and stupid natures. No wonder that club law prevailed for centuries over Europe; the wonder rather is that enough good remained in the veins of Europeans to enable their race to rise to its present very moderate level of natural morality.

A relic of this monastic spirit clings to our universities who say to every man who shows intellectual powers of the kind they delight to honor, "Here is an income of from one to two hundred pounds a year, with free lodging and various advantages in the way of board and society; we give it you on account of your ability; take it and enjoy it all your life if you like: we exact no condition to your continuing to hold it but one, namely, that you shall not marry.

The policy of the religious world in Europe was exerted in another direction, with hardly less cruel effect on the nature of future generations, by means of persecutions which brought thousands of the foremost thinkers and men of political aptitudes to the scaffold, or imprisoned them during a large part of their manhood, or drove them as emigrants into other lands. In every one of these cases the check upon their leaving issue was very considerable. Hence the church, having first captured all the gentle natures and condemned them to celibacy, made another sweep of her huge nets, this time fishing in stirring waters, to catch those who were the most fearless, truth-seeking, and intelligent in their modes of thought, and therefore the most suitable parents of a high civilization, and put a strong check, if not a direct stop, to their progeny. Those she reserved on these occasions, to breed the generations of the future, were

the servile, the indifferent, and, again, the stupid. Thus, as she—to repeat my expression—brutalized human nature by her system of celibacy applied to the gentle, she demoralized it by her system of persecution of the intelligent, the sincere, and the free. It is enough to make the blood boil to think of the blind folly that has caused the foremost nations of struggling humanity to be the heirs of such hateful ancestry, and that has so bred our instincts as to keep them in an unnecessarily long-continued antagonism with the essential requirements of a steadily advancing civilization. In consequence of this inbred imperfection of our natures, in respect to the conditions under which we have to live, we are, even now, almost as much harassed by the sense of moral incapacity and sin as were the early converts from barbarism, and we steep ourselves in half-unconscious self-deception and hypocrisy as a partial refuge from its insistence. Our avowed creeds remain at variance with our real rules of conduct, and we lead a dual life of barren religious sentimentalism and gross materialistic habits.

The extent to which persecution must have affected European races is easily measured by a few well-known statistical facts. Thus, as regards martyrdom and imprisonment, the Spanish nation was drained of freethinkers at the rate of 1000 persons annually, for the three centuries between 1471 and 1781; an average of 100 persons having been excuted and 900 imprisoned every year during that period. The actual data during those three hundred years are 32,000 burnt, 17,000 persons burnt in effigy (I presume they mostly died in prison or escaped from Spain), and 291,000 condemned to various terms of imprisonment and other penalties. It is impossible that any nation could stand a policy like this without paying a heavy penalty in the deterioration of its breed, as has notably been the result in the formation of the superstitious, unintelligent Spanish race of the present day.

Italy was also frightfully persecuted at an earlier date. In the diocese of Como, alone, more than 1000 were tried annually by the inquisitors for many years, and 300 were burnt in the single year 1416.

The French persecutions, by which the English have been large gainers, through receiving their industrial refugees, were on a nearly similar scale. In the seventeenth century three or four hundred thousand Protestants perished in prison, at the galleys, in their attempts to escape, or on the scaffold, and an equal number emigrated. Mr. Smiles, in his admirable book on the Huguenots, has traced the influence of these and of the Flemish emigrants on England, and shows clearly that she owes to them almost all her industrial arts and very much of the most valuable lifeblood of her modern race. There has been another emigration from France of not unequal magnitude, but followed by very different results, namely, that of the Revolution in 1789. It is most instructive to contrast the effects of the two. The Protestant emigrants were able men, and have profoundly influenced for good both our breed and our history; on the other hand, the political refugees had but poor average stamina, and have left scarcely any traces behind them.

It is very remarkable how large a proportion of the eminent men of all countries bear foreign names, and are the children of political refugees, — men well qualified to introduce a valuable strain of blood. We cannot fail to reflect on the glorious destiny of a country that should maintain, during many generations, the policy of attracting eminently desirable refugees, but no others, and of encouraging their settlement and the naturalization of their children.

No nation has parted with more emigrants than England, but whether she has hitherto been on the whole a gainer or a loser by the practice, I am not sure. No doubt she has lost a very large number of families of sterling worth, especially of laborers and artisans; but, as a rule, the very ablest men are strongly disinclined to emigrate; they feel that their fortune is assured at home, and unless their spirit of adventure is overwhelmingly strong, they prefer to live in the high intellectual and moral atmosphere of the more intelligent circles of English society, to a self-banishment among people of altogether lower grades of mind and interests. England has certainly got rid of a great deal of refuse through means of emigration. She has found an

outlet for men of adventurous and Bohemian natures, who are excellently adapted for colonizing a new country but are not wanted in old civilizations ; and she has also been disembarrassed of a vast number of turbulent radicals and the like, — men who are decidedly able but by no means eminent, and whose zeal, self-confidence, and irreverence far outbalance their other qualities.

The rapid rise of new colonies and the decay of old civilizations is, I believe, mainly due to their respective social agencies, which in the one case promote, and in the other case retard, the marriages of the most suitable breeds. In a young colony, a strong arm and an enterprising brain are the most appropriate fortune for a marrying man, and again, as the women are few, the inferior males are seldom likely to marry. In an old civilization the agencies are more complex. Among the active, ambitious classes none but the inheritors of fortune are likely to marry young ; there is especially a run against men of classes C, D, and E,¹ — those, I mean, whose future is not assured except through a good deal of self-denial and effort. It is almost impossible that they should succeed well and rise high in society, if they hamper themselves with a wife in their early manhood. Men of classes F and G are more independent, but they are not nearly so numerous, and therefore their breed, though intrinsically of more worth than E or D, has much less effect on the standard of the nation at large. But even if men of classes F and G marry young, and ultimately make fortunes and achieve peerages or high social position, they become infected with the ambition current in all old civilizations of founding families. Thence result the evils I have already described, in speaking of the marriages of eldest sons with heiresses and of the suppression of the marriages of the younger sons. Again, there is a constant tendency of the best men in the country to settle in the great cities, where marriages are less prolific and children are less likely to live. Owing to these several causes, there is a steady check in an old civilization upon the

¹ In an earlier chapter Mr. Galton graded men of average ability or higher, into the classes A, B, C, D, E, F, and G, A being the average men, and G the geniuses. — ED.

fertility of the abler classes; the improvident and unambitious are those who chiefly keep up the breed. So the race gradually deteriorates, becoming in each successive generation less fitted for a high civilization; although it retains the external appearances of one, until the time comes when the whole political and social fabric caves in and a greater or less relapse to barbarism takes place, during the reign of which the race is perhaps able to recover its tone.

The best form of civilization in respect to the improvement of the race would be one in which society was not costly; where incomes were chiefly derived from professional sources, and not much through inheritance; where every lad had a chance of showing his abilities and, if highly gifted, was enabled to achieve a first-class education and entrance into professional life, by the liberal help of the exhibitions and scholarships which he had gained in his early youth; where marriage was held in as high honor as in ancient Jewish times; where the pride of race was encouraged (of course I do not refer to the nonsensical sentiment of the present day that goes under that name); where the weak could find a welcome and a refuge in celibate monasteries or sisterhoods, and, lastly, where the better sort of emigrants and refugees from other lands were invited and welcomed, and their descendants naturalized.

XXVI

NATURAL SELECTION AND SOCIAL SELECTION¹

PREPONDERANCE OF SOCIAL SELECTION

Aristotle, the founder of political science, defined man as "the animal which lives under social conditions." These conditions force themselves upon man so peremptorily that solitary life implies a very serious psychic anomaly, barring the special cases which produce Robinson Crusoes. However shy a savage may be, he carries with him a rudimentary society, — his mate and his young; and the population is never so sparse that he can avoid meeting other groups with whom he must have relations and exchange courtesies or spear cuts.

His situation, then, is quite different from that of the common run of animals. He thinks; he speaks; he is armed. He will never pass his fellow as animals do without looking at him. His existence will all of it be dominated by social relations, rudimentary as they may be, and natural selection ceases to exercise the same pressure upon him as upon the rest of the animated world. I mean that it is transformed into social selection, in proportion as the social environment surpasses in influence the environment of nature.

In man, social selection overrides natural selection. This, I believe, is the oldest principle of selectionism. Wallace, Darwin's rival, rightly maintained in entering upon the then new and dreadful question of the origin of man ("The Origin of Human Races," *Journal of the Anthropological Society*, 1864, p. 158) that on the day when man's brain had acquired its power, natural selection ceased to have a hold on him. Broca, in his critical

¹ From *Les Sélections Sociales*, by G. Vâcher de Lapouge, Paris, Librairie Thorin & Fils (A. Fontemoing, successeur), 1896, chap. vii. Translated by Steven T. Byington.

report on Darwin's *Descent of Man* ("Les Sélections," *Revue d'Anthropologie*, 1872, pp. 705 *et seq.*) said with still greater accuracy: "[Society] . . . cannot exempt man from the ineluctable law of the combat of life, but it does profoundly modify the field of battle. It substitutes for natural selection another selection in which natural selection no longer plays any but a diminished (often almost obliterated) part, and which deserves the name of social selection." This sentence is memorable; it is the first in which we see the name of social selection appear.

Moreover, it must be that man was already under the pressure of this selection before he was man, if one may so speak; for, as a matter of fact, evolution must have been so slow, so gradual, that it would be very difficult to draw the line in the ascent. True social relations exist among all species of Primates, and it must have been so among our ancestors when they were still in the matrix of animality; even among those from whom we are separated by series of successive forms. The most human institutions — the family, government, the state, property — are found in a simple and frail form among apes. It is not at all probable that man ever passed through the state of entire independence and absolute individualism assumed by philosophers. According to all the data of zoölogy, the first man was born of a female that had her male, in a troop that had its chief, on land which was the country and the property of his kin.

To-day the social state dominates even the most savage man; it removes him from the independence of animal life and from its consequences. One is frightened to see the prodigious complication of social usages which regulate the most immaterial act of the Fuegian or the Australian. The wretched Bushman, the Mincopie, are as much the slaves of rites and social usages as the emperor of China: If one looks closely, it is among civilized men that a relative liberty reigns, and that each depends least on his neighbor for the acts of his private life.

By the aid of fire and clothing man exempts himself from the action of cold; in his huts where the air penetrates he escapes the action of the sun; by his intelligence he provides more surely for his nourishment; by his weapons he is victorious in conflict

with other animals, he makes some his prey, he escapes being the prey of others. Nay, in countries entirely civilized, he no longer has enemies to fear, — the dangerous animals are destroyed ; he no longer has to occupy himself in seeking food, — he finds it at the merchant's. The struggle for existence is now only with his fellow : *Homo homini lupus*. It is carried on only by social acts ; it is none the less hard and murderous for having changed its manner and its name.¹

SELECTION BY CLIMATE ; BY DIET

Let us rapidly go over the restricted domain, growing narrower and narrower, of natural selection. All that touches climate and diet we already know. It is by way of natural selection, not of transformation — transmutation — that races are modified when carried to countries whose climate is new to them. The same selection operates in extreme climates even on individuals who have for long generations been acclimated, and gives a character to the normal mortality in each country : here affections of the respiratory channels, there of the liver. The mountaineer's abode is also the cause of a selection of the same order ; bacteria of all sorts are infinitely rarer in water flowing from springs, and in the air of high elevations. This is a point of bacteriology too well known to dwell on. So mountaineers, aside from race, have more chances to escape from bacterial disorders than the inhabitants of plains, and especially than those of cities. As to diet, I have dwelt so much on its selective influence that I need not return to it.

It is well to note that these selections by environment are themselves not altogether comparable to those that take place among animals. It is social causes that determine emigration to colonies, the crowding of population in cities, the abundance or scarcity of food. Society appears as the indirect first cause of the selection which thus goes on under natural forms.

¹ This simply means that men must adapt their economic activities more and more to a social, and less and less to a physical, environment. The hunter and the financier are at opposite extremes. — Ed.

SEXUAL SELECTION

Of all natural selections, this is the most important for mankind. Darwin thought that the evolution from the precursor to man took place under the influence of sexual selection. Broca, in the work cited above, rejects this explanation. The selection which produced this result was no other than that of intelligence; or, at least, one cannot in the present state of our knowledge think of a more effective one. None the less, sexual selection has played a great part in all ages, and its importance has decreased without disappearing. Sexual preference—among us it is called love—is limited by the necessities of social life in our countries of intense civilization, but it is not suppressed. One still sees unions inspired by sentiments foreign to social considerations. True cases are not very frequent; many very sincere loves have had for their first object the *beaux yeux de la cassette*, and material interests have formed a fascinating halo about the loved one. One loves the dowry, then one is caught in one's own snare and loves the woman. Come ruin, love takes flight.

Yet the statistical researches of H. Fol of Geneva have proved that unions were being often formed under conditions of morphological resemblance sufficient to let us assume a sexual preference between similar individuals. It seems that among the persons who combine the desired circumstances, that one is preferred with whom the analogies are closest. M. Hermann Fol brought together the photographs of 251 couples; he made one lot of young couples, comprising 198, and another of old couples, comprising the 53 others. In each lot he divided the couples according as the resemblance of the parties was very great, moderate, or dubious or none, and he obtained the following results.

	RESEMBLANCE VERY GREAT	MODERATE RESEMBLANCE	DUBIOUS OR NONE
Young couples	27.3%	39.4%	33.3%
Old couples	24.5%	47.2%	28.3%

To sum up, the cases of appreciable resemblance between the parties amount to 66 per cent in the series of young couples, 71 per cent among the old couples. "Let us note," remarks this naturalist (*Revue Scientifique*, 1891, Vol. 47, p. 49), "that if unions were formed by chance, or, what comes to the same thing from our point of view, solely from motives of convenience or of interest, the number of cases of resemblance between young married people would not reach to 2 per cent." Hence he concludes, first, that couples unite in accordance with the rule of conformities and not in accordance with that of contrasts; second, that the resemblance between old married people is not a fact acquired in consequence of conjugal life.

It would be important to repeat under different circumstances these researches, which bore chiefly on the lower classes of the population, — those classes in which personal initiative is more marked and choice less limited.

J. Beddoe, operating at Bristol in a different ethnographic environment, found analogous results. Studying women from 35 to 50 years of age — the age of definitive coloring — in the Bristol Hospital, he found the following relations between color of hair and matrimonial position.

	RED HAIR	FAIR HAIR	LIGHT CHESTNUT HAIR	DEEP CHESTNUT HAIR	DARK HAIR
Single	9.8%	9.0%	28.7%	38.5%	13.9%
Married	5.5%	10.2%	35.0%	40.8%	8.4%

It follows from these figures that the scarce colors, red and dark, are comparatively given the go-by in this region of England (*Races of Britain*, p. 226). The dark are left on the counter, the red little in demand. In Switzerland and in other countries it appears to be otherwise, according to statistics by De Candolle ("Hérédité de la Couleur des Yeux," *Archives des Sciences Physiques et Naturelles*, 1884, p. 14): "The 158 dark-eyed men married 52 per cent of wives of their color and 48 per cent with gray or blue eyes. As there exist 44 per cent of dark eyes

among the women of French-speaking Switzerland, it appears that these pleased them more. The 167 men with blue or gray eyes married 59 per cent of dark-eyed wives; this is much more than the proportion among the women of the country." This exception is perhaps due to the liveliness and pleasingness of dark eyes, which are much superior to medium ones. In countries with a population formed of a mixture of *Homo Alpinus*¹ and *Homo Europaeus*,¹ like Switzerland, such a choice is calculated to favor the former race, for it presents more dark eyes. The tendencies observed at Bristol are rather unfavorable to it; but in these matters questions of imitation, fashion, and taste may play a very great part.

A very important remark of De Candolle: "In French-speaking Switzerland there have been observed for 91 concolorous couples (couples with eyes of the same color) 246 children above the age of ten, and for 122 bicolorous couples 389; this gives 2.7 per concolorous couple and 3.18 per bicolorous couple. In Germany, for 98 concolorous couples 289 children, and for 82 bicolorous 252; that is, 2.9 and 3.07 per couple. Not even the returns from Liège fail to show the same difference, though their figures are very slight. They indicate for 17 concolorous couples 44 children, and for 17 bicolorous 59, which makes 2.5 for the first and 3.47 for the second." Such an inequality in the birth rate is very serious; the question is to know whether it is due to biological or to social causes. I should be quite willing to believe that the higher birth rate of the bicolorous unions is due to the fact that they are formed more among the lower classes, the brachycephalic masses that are pullulating so. This supposition is given a certain weight by the observations which follow. ". . . I find for 72 concolorous dark couples 221 children, and for 131 concolorous blue or gray couples 357, or 3.07 and 2.72 per couple." The birth rate of the fair races being very low, we must assume that the fair couples belonged mainly to the upper classes, who are everywhere less prolific and richer in elements derived from the European race. At any rate, these researches are very curious, and any one who would undertake

¹ Linnæus.

the work of generalizing them, using large numbers as his basis, would probably find himself paid for his pains.

PATHOLOGICAL SELECTION

The races present different degrees of resistance to certain diseases. Between *Homo Europæus* and *Homo Alpinus* there exists a very decided difference as regards miliary fever,¹ granular conjunctivitis, and myopia. The first disease decimates the dolicho-blonds of the west of France at each epidemic; it hardly touches their competitors. At Montpellier, a case of granular conjunctivitis on a brachycephalic is a rarity. The map of frequency of exemptions from military service for myopia is approximately identical with the map of the cephalic index. In America, the negro is nearly immune against yellow fever and against various local diseases very destructive to the whites. Contrariwise, in Africa, in Indo-China, the Europeans are almost entirely refractory to certain local diseases. In this sphere of ideas numerous researches have been made by Dr. Bordier and by various naval physicians, to whose works I confine myself to referring, being desirous not to risk myself on ground where I have hitherto made no personal researches. It would be superfluous to repeat what others have said more competently than I could.

SOCIAL SELECTIONS

To sum up, the domain of natural selection is quite limited. The part it plays in evolution is superior to that of the causes of transmutation, but does not come near to that of the causes of social selection. The philosophy of history is almost entirely comprised in the study of social selections. There remains yet a wide field for statisticians, historians, and anthropologists, to complete the picture of the social selections.

¹ *La suette miliaryre*, not typhoid fever or prickly heat (which are definitions given for "miliary fever" by some authorities), but an epidemic apparently identical with the "sweating sickness" of the sixteenth century, though its modern manifestations differ in certain symptoms. England, which was the special home of the earlier disease, seems to be exempt in our day, and likewise America; hence the frequent ignoring of the modern disease by English and American authorities. — TRANSLATOR.

XXVII

THE EVOLUTIONARY FUNCTION AND USEFULNESS OF CRIME AND PUNISHMENT¹

Each human community, in every age, is busy molding its individual members into conformity with its own type, — into a closer resemblance to the social ideal. The American is different from the Englishman, and both are unlike the German. The French type is markedly distinct and separate from both the Italian and the Spanish. A social education environs us from the cradle to the grave, — a pressure to be this kind of man and not to be this other and antagonistic kind. If, for the most part, we are scarcely conscious of this molding influence, it is because we are so used to it, and because we are ourselves scions of the national stock, inheriting these national traits and tendencies from our remote ancestors. Settle in a foreign land, and the pressure soon becomes disagreeably, perhaps painfully, apparent; and you must conform, in large measure, to these unwonted customs, rules, and ways of doing things, if you would be happy and prosperous in the new environment.

In the furtherance of this social education, two great natural forces — strong, ever-present, social tendencies — are made use of, encouraged, trained, by the social group. One is the natural admiration and imitation of strong men, largely resembling their comrades, only somewhat better representatives of the developing social type; and the second is the instinctive abhorrence and persecution of individuals unlike their fellows, — antisocial variations — dangerously hostile to the common weal. These two great socializing tendencies, or forces, work together in absolute harmony; and along the line of progress they induce, social pressure becomes more and more strongly developed,

¹ From *Crime in its Relation to Social Progress*, by A. Cleveland Hall, pp. 1-22 (copyright, 1902, by the Columbia University Press, New York).

with increasing social evolution. This pressure is partly conscious and partly unconscious, in both directions: of praise or blame, of honor or persecution. The limits of the field of crime are largely coterminous with the extent of *conscious* persecution and punishment by the social group for wrongs against itself, and are continually being extended with the progress of civilization.

The creation of a new crime (that is, the branding by society of some form of conduct as criminal) always implies social punishment, — a punishment enforced to raise the community to a higher plane of life, a nearer approach toward the social ideal. A new form of crime means either a step forward or a step backward for the nation choosing it. Wisely chosen, it is an active force driving man upward to a better, more truly social, stage of civilization; but the nation that persists in choosing its crimes wrongly is on the highroad to degeneration and decay. Crime is to the body social much what pain is to the individual. Pain is the obverse of the shield of pleasure, and without the existence of pain there is no pleasure possible; without increasing pain there is no growth of higher pleasures. So, also, crime is the obverse of the shield of social good, and without increasing crime there is probably no growth in social goodness, — or, in other words, no development of the nation into the fullness of its strength, happiness, and usefulness. It will cease to be a living force in the evolution of a higher world civilization, and will become stationary, like the Chinese, or degenerate, like the American Indian.

Crime, therefore, is an inevitable social evil, the dark side of the shield of human progress. The most civilized and progressive states have the most crime. It is a social product, increasing with the growth of knowledge, intelligence, and social morality, with all that is summed up in the words "higher civilization."¹

¹ There is scarcely a state in the American Union for which the census statistics do not show a large and, for the most part, progressive increase in the number of criminals (i.e. prisoners) in proportion to population, since 1850. The average numbers for these five census periods are: For Massachusetts, 1899 prisoners per 1,000,000 population; New York, 1378; Maryland, 993; Missouri, 689; Arkansas, 651; Mississippi, 551; Utah (four last census periods), 529; New Mexico (four last census periods), 510.

The increase of crime largely takes the direction of acts in opposition to new social prohibitions. These prohibitions are neither accidental nor whimsical, but are inevitable consequences of the increasing complexity of life. In general, new crime follows lines of greatest resistance to the new life of society.

This book is an attempt to study some of the relations of crime to social progress, chiefly two great phases of the subject, namely: the evolutionary function and usefulness of crime and punishment, and crime as a social product, increasing with the increase of social prohibitions.

Nature's great task, throughout the ages, seems to have been the elevation of the individual, at the expense of his powers of reproduction, — individuation versus procreation, — resulting in the persistent rise in value of the individual life, as measured in terms of size, strength, and activity of body and of brain. The forces preservative of race are two, writes Herbert Spencer, — the power to maintain the individual, the power to generate the species. These vary inversely — as one decreases the other increases.¹ The evolution of larger, stronger, more highly developed forms of life is always accompanied by the same phenomenon, — a decreasing birth rate. The minutest organisms multiply in their millions; the small compound types next above them in their thousands, while larger and more compound types multiply but in their hundreds or their tens, and the largest and most highly developed types only by twos or units.² Lowest organisms are marvelously prolific. The shallow seas of the Paleozoic age swarmed with minute life, which left its history written in the fossils of the hills, in the coral reefs of ocean, in chalk cliffs and siliceous deposits everywhere, and in "the summits of great mountain ranges in Europe, Africa, and India," formed of tiny shells of animals (known as nummulites), which lived and died and helped to build our earth, during those early ages.³ Undeveloped life is almost completely dependent upon its physical environment. The lower the organism the smaller its ability to contend with external dangers, and great fertility is absolutely necessary to

¹ See Principles of Biology, Vol. II, p. 401.

² *Ibid.*, pp. 426-427.

³ Mitchell, p. 47.

preserve the species from destruction. Evolutionary forces act upon these lowly forms of life mainly *from the outside, upon whole groups*, rather than from within the group, upon its members singly.¹ The development produced by such means is enormously expensive. Nature seems to squander life, holding it of little worth.

A thousand types are in the hills.

During the Mesozoic or reptilian age, natural selection was working along a low plane of individual self-interest; dominance was the reward of great size and enormous physical strength. But in united effort there is greater power than any gigantic brute can possess, and social life, with its mutual helpfulness against enemies and stimulation of mental development, becomes the prime requisite for success in the struggle for existence, — the great means to the attainment of a higher, more unselfish life.

After some mental activity has been aroused within the social group, there is, as it were, an effort of nature to promote upward growth by a less wasteful process, using the awakened individual intelligence, combined with the inherited social instinct, to induce evolution from within the group, by encouraging useful variation from the average — thus producing the leader — and punishing harmful variation, thus ultimately converting the mere malefactor into the criminal. Social pressure from within the group unites with the pressure from without to uplift and socialize the individual. One of the most important forms of this inner pressure is called among men criminal prosecution and punishment.

A social group is fundamentally a kindred group. Its members feel a resemblance among themselves, and a sense of safety and of pleasure develops. There is general likeness with individual variation. The natural leaders are very like their fellows,

¹ A numerically large group of these microscopic organisms would occupy a very small space on the surface of our earth, and their environment would be practically the same for all individuals; that is, the forces acting upon them for good or evil would be in general the same throughout the entire group; and, being so very plastic under external influences, they would all develop in much the same way, until success or destruction came to the entire band. Another similar group, a little removed in space, might have a different set of forces acting upon it, have its individual units differently developed, and perhaps succeed where the first group failed.

being simply somewhat stronger exponents of the developing social type. Divergence from this type is disliked, and antagonistic variation meets with conscious or unconscious persecution. And rightly so, for the social might stands as a shield before each and every member, protecting him from the destruction his weakness must call down, if left unaided. In so doing, society makes itself, as it were, responsible to nature for the acts of all its members. The individual whose persistent conduct weakens the social bond, or injures the effectiveness of the social group, must be made powerless to harm; for, since social life to a large extent prevents the immediate action of natural selection upon the individual, wise social selection must take its place, or destruction comes to all.

This is the explanation of crime and of the necessity for its punishment. Individual variations, actively antagonistic to the prevalent social type, exist in all the higher social groups. Commonly they are social laggards, who have not kept pace with the average development toward the social ideal. The rebellious social laggard is the true criminal; other laggards belong to the pauper class. Even the higher animal societies collectively punish the most dangerous antisocial acts. Much the same conduct with a few additions is punished by the lowest human societies now known upon the earth; and, as social life attains to higher planes, more and more actions become socially harmful, are generally recognized as such, and added to the list of crimes; that is, the list of actions which society punishes as wrongs against itself, for the sake of the general welfare, for the preservation of the social life, for the elevation of the individual toward the ideal of the social type.

Thus the production of crime and criminals is one of the saving processes of nature, substituting a lesser for a greater evil, promoting upward progress at a smaller cost. For if nature had not induced this increasingly severe social selection and pressure within the group, toward the elevation of the individual and the improvement of the type, then that primitive and unreasoning form of pressure from physical forces without the group, which always persists, must have continued alone in operation,

destroying countless individuals and groups, without, if we may so express it, the attempt to educate them into the true lines of their upward development.

Ancient human society was organized upon the basis of kindred — blood relationship — and not upon the possession of a common territory. Now, the individual is the unit, and is responsible to the state alone. Then, the kindred was the unit, and a wide system of group responsibility prevailed.¹ A man was responsible to his kindred, gens (or clan), his phratry, tribe, and tribal confederacy, if this last existed. Each of these groups was likewise responsible for the man, for each and every member. It suffered for his misdeeds and could be rewarded for his good actions. The minor groups were originally independent — not yet included in any larger and more complex social body — and possessed, or, we may almost say, were possessed by, a wild and ferocious justice, reeking itself in fierce spasms of social vengeance, “half punishment, half outrage,” upon some hated member of the band. Few acts, however, were punished by the social groups, as such, and few acts were therefore crimes. Injuries to individuals were left to private revenge, and there were other harmful acts — sins — supposed to be punished by the gods.

In gentile society, the household was the economic institution. Its chief function was the obtaining of a food supply. The gens (or clan) was a mutual protective association, for help, defense, and redress of grievances. Its function may be called judicial protective.² The phratry (*φρατρία*, “brotherhood”) was formed by a union of related gentes. It was the chief religious institution and had also social and judicial protective functions.³ The tribe or tribal confederacy was primarily a military institution, standing for the unity and might of the gentile people.⁴

Each one of these social groups possessed judicial and penal authority, by right of ancestral, immemorial custom. Yet, in the most primitive legal codes which have come down to us, the evidence for such authority is very scanty. Why is this? Early Germanic codes of customary law embody but a part of the

¹ Hearn, p. 457; Maine, pp. 126-127.

² Morgan, *Ancient Society*, pp. 76, 77.

³ *Ibid.*, p. 94.

⁴ *Ibid.*, p. 117.

ancient penal customs of the race. Thus we find no mention of the father's right to punish for offenses within the family. Such power was regulated, then as now, by social custom and existed none the less surely, though not chronicled in written laws.¹ Thus, also, crimes,² or authority to punish for such offenses, are rarely mentioned; yet crimes existed, and the ability and will to punish were not lacking. These codes of the German barbarians afford us, nevertheless, by far the most clear and complete record we possess of ancient legal systems.³ They deal almost entirely with offenses which would now be classed as criminal, but which were not criminal then, in any true sense of that word.⁴ They were injuries inflicted by man upon his fellow-man, such as would now result in a civil suit for damages. These acts were not regarded nor punished by society (or the state) as wrongs against itself, and in this consists the very essence of all crime. The laws, at first, simply afforded an opportunity for the injured party to accept compensation rather than exact private vengeance (his undoubted right). The penalty was proportioned to the provocation, and not to the offense. Later, the laws hardened into a compulsory seeking and acceptance of composition offered for an offense, before private vengeance could be legally pursued. The man who refused to ask and accept an atonement for the injury received, and the offender who would not pay the customary price for his forgiveness, thus preserving the peace of the community, came to be regarded as untrue to the folk, and were solemnly declared outside of the law's protection, — outlaws. Such men were true criminals; possibly the first dealt with, under the law, as distinguished from ancient social custom.⁵

Thus we find in the earliest Germanic codes many penal laws, but not much *true criminal law*.⁶ They were attempts, at first

¹ Offenses against the father's authority have never been crimes in any age, no matter how great the paternal right of chastisement. They were sins rather.

² Brunner, Vol. II, pp. 603 *et seq.*

³ Maine, p. 367.

⁴ See article on Crime, Encyclopædia Britannica.

⁵ R. R. Cherry, p. 14. For Iceland, see *The Story of Gisli, the Outlaw*; edited by Sir J. Dasent.

⁶ Maine, pp. 369-370.

weak, but steadily gaining in firmness and hardening into law, to tame these wild men of the woods, by substituting an elaborate system of composition for the dearly loved right of blood revenge. But the lack of a developed criminal law is no evidence that crimes were not recognized and punished by early Germanic society. In fact, we have positive proof to the contrary not only for the Germans but for all other races of the great European-Aryan stock, and even for the lowest savage hordes known to man, such as the Australian Black-fellows and the African Bushmen. Human society everywhere, writes Waitz, "has some common interest in opposition to the private interests of the individuals composing it."¹ Where the individual insists upon acting in opposition to social necessity, there we have the true criminal, and society must punish him or cease to exist.

How did primitive society punish the criminal? Just as private vengeance struck down the man who had harmed his fellow-man, so social vengeance destroyed the malefactor who had injured the social body so seriously as to awaken in its members the passionate longing for revenge. There was no criminal law, because there was a separate action and procedure in the case of every criminal. Fundamentally instinctive, as are many acts of self-preservation, and for long largely unreasoning, like the lynch law of mobs, primitive society struck at its criminal members directly, through the folk-mote or assembly of all freemen. The people tried, condemned, and punished, following the dictates of ancestral custom, with its roots deep in instinctive necessary action. Socially necessary action equals right action, because it is indispensable for social self-preservation and upward progress. The people also slowly and almost unconsciously modified ancient custom to meet new needs.

No higher power — king, or priest, or noble — decreed what acts should be called criminal or compelled their punishment. Lowest savage tribes are intensely democratic and acknowledge no form of government, human or divine. Higher societies — Homeric Greeks, Romans of the days of Romulus, early Celts, Slavs, and German barbarians of the first Christian century —

¹ Waitz, *Anthropology*, p. 276.

elected their magistrates, chiefs, and kings, who could also be deposed by the assembly of the freemen, and most important matters were always referred to its decision.¹ The people were sovereign, judge, and often executioner. They alone determined what constituted crime. They alone had power to condemn and punish criminals. Crime was and is a social product.

How then shall we define crime? Crime is any act or omission to act, punished by society as a wrong against itself. This is not merely the author's own definition of crime, possibly made to harmonize with his peculiar views: it is the condensed expression of opinions held in common by the whole school of historical jurisprudence, and generally accepted by modern writers on criminal law, as the reader may prove for himself by an examination of the following passages:

SIR HENRY SUMNER MAINE

Ancient Law

In the primitive history of criminal law, "*the conception of crime*, as distinguished from that of *wrong or tort*, and from that of *sin*, involves the *idea of injury to the state or collective community*." "The commonwealth itself interposed directly and by isolated acts to avenge itself on the author of the evil which it had suffered." (p. 385.)

"The earliest conception of a *crimen* or crime is an act involving such *high issues* that the state, instead of leaving its cognizance to the civil tribunal, or the religious court, directed a special law or *privilegium* against the perpetrator." "*The tribunal dispensing justice was the sovereign state itself*." There was *not* "at this epoch any *law of crimes*, any criminal jurisprudence."² The procedure was identical with the forms of passing an ordinary statute." (pp. 372-373.)

"Nothing can be simpler than the considerations which ultimately led ancient societies to the formation of a true criminal jurisprudence. *The state conceived itself to be wronged*, and the

¹ Ihering, *Vorgeschichte der Indoeuropäer*, pp. 396-397.

² This is somewhat too sweeping a statement, as German students have proved.

popular assembly struck straight at the offender with the same movement which accompanied its legislative action." (p. 381.)

Later, "when a regular criminal law with courts and officers had come into being, the old procedure remained practicable. *The people of Rome always retained the power of punishing by a special law offenses against its majesty.*" So "the Athenian Bill of Pains and Penalties, or *Εἰσαγγελία*, survived the establishment of regular tribunals." (p. 373.) "The *Heliaea* of classical times was simply the *popular assembly* convened for *judicial purposes*, and the famous *Dikasteries* of Athens were only its subdivision or panels." "The history of Roman criminal jurisprudence *begins* with the old *judicia populi*, at which the kings are said to have presided. These were simply *solemn trials of great offenders* under legislative forms." (p. 382.) "When the *freemen of the Teutonic races assembled for legislation* they also claimed authority to punish *offenses of peculiar blackness* or perpetrated by criminals of exalted station. Of this nature was the criminal jurisdiction of the Anglo-Saxon *witenagemote*." (p. 374.)

R. R. CHERRY

The Growth of Criminal Law in Ancient Communities

"In *ancient law* there is *no such thing as a crime*." "*Criminal law*, as distinct from *penal law*, involves some element of *public condemnation*, such as a sentence of outlawry." "The prototype of a modern criminal trial appears in the solemn proclamation at the tribe meeting, after full inquiry, of the sentence of outlawry." (p. 14.)

"*Criminal law originated not in any command at all* (as the school of analytical jurisprudence seems to maintain) but in the *custom of retaliation*, at a time when there was no such thing as a sovereign body to issue a command, and no means of enforcing it, were it issued." (p. 16.)¹

¹ John Austin, founder of the school of analytical jurisprudence, gives the following definition of law in his *Lectures on Jurisprudence* (edition of 1869): "Law is a rule laid down for the guidance of an intelligent being by an intelligent being having power over him." (p. 88.) "Customary laws are positive laws fashioned by judicial legislation upon preëxisting customs." "These customs are

O. W. HOLMES, JR.

The Common Law

"The germ of criminal law is found in the *desire for retaliation* against the offending thing itself . . . *vengeance* was the original object." (p. 34.)

"The secret root from which the law draws all the juices of life . . . i.e. considerations of what is expedient for the community concerned; . . . generally the unconscious result of instinctive preferences and inarticulate convictions." (pp. 35-36.)

JOHN WILDER MAY

The Law of Crimes

"Crime is a violation or neglect of duty of *so much public importance* that the law, either common or statute, takes notice of and punishes it." (p. 1.) "Not every act which is legally wrong is a crime. Private wrongs are redressed by suits *inter partes*. In a *criminal prosecution* the government itself is a party, and the government moves only when *the interest of the public is involved*. The basis of criminality is therefore the effect of the act complained of upon the public." (p. 4.)

"*Moral obliquity is not an essential element of crime*. What, therefore, is criminal in one jurisdiction may not be criminal in another, and what may be criminal at a particular period is often found not to have been criminal at a different period in the same jurisdiction." "The *general opinion of society*, finding expression through common law or through special statutes, *makes an act to be criminal or not* according to the view which it takes of the proper means of preserving order and promoting justice." "Adultery is a crime in some jurisdictions, while in others it is left within the domain of morals." "Embezzlement, which was, till within a comparatively recent period, a mere breach of trust, cognizable only by the civil courts, has been nearly, if not quite merely rules set by opinions of the governed, and sanctioned or enforced morally" till they "are clothed with legal sanctions by the sovereign one or number." (p. 204.) Under these ancestral customs crime was punished by society long before law began.

universally, brought by statute into the category of crimes as a modified larceny." "The sale of intoxicating liquors is or is not a crime, according to the different views of public policy entertained by different communities." (pp. 4 and 5.) "It is impossible to draw an exact line between offenses that are criminal and those which are merely civil wrongs." The question to be settled is, "*Has the public security been endangered by the offense?*" (pp. 7 and 10.)¹

American and English Encyclopædia of Law, second edition, 1898
(The latest and best work of the kind)

Article on crime. "A crime is more accurately characterized as a *wrong directly or indirectly affecting the public*, to the commission of which the state has annexed certain punishments and penalties, and which it prosecutes in *its own name* in what is called a criminal proceeding." (p. 248.)

Crimes distinguished from civil injuries. In *State v. Williams*, 7 Rob. (La.) 271, it is said: "The distinction of public wrongs from private, of crimes and misdemeanors from civil injuries, seems principally to consist in this: that private wrongs, or civil injuries, are an infringement or privation of the civil rights which belong to individuals, considered merely as individuals; public wrongs, or crimes and misdemeanors, are a breach and violation of the public rights and duties due to the whole community, considered as a community, in its social aggregate capacity." (4 Blackstone Com. 5.)

These extracts from the works of well-known writers on jurisprudence should suffice to give us clear ideas concerning the

¹ May classifies crimes as *treasons, felonies, and misdemeanors*. Treason is a direct attack upon government and disturbs the foundations of society itself. It is "active disloyalty to the state." (This was probably the original form of crime.)

Beccaria (Marquis) of Milan: "Observe, that by justice I understand nothing more than that bond which is necessary to keep the interest of individuals united, without which men would return to the original state of barbarity. All punishments which exceed the necessity of preserving this bond are in their nature unjust." See Beccaria, chap. ii, "Of the Right to Punish."

"Every punishment which does not arise from absolute necessity," says the great Montesquieu, "is tyrannical." (Same chapter.)

origin and nature of crime and criminal law. We see that among primitive peoples criminal law had scarcely yet come into existence. The penal laws first developed were laws of tort, or injuries of man to man; and laws of sin, or offenses against the gods. But the idea of crime as a serious injury to society itself, and the punishment of criminals by society, obedient to the passion for vengeance and the dictates of ancestral custom, are found everywhere among primitive Aryans and all other races of men. As that great authority, Sir Henry Sumner Maine, writes in *Ancient Law* (p. 372):

"It is not to be supposed that a conception so simple and elementary as that of wrong done to the state was wanting in any primitive society. It means rather that the very distinctness with which this conception is realized is the true cause which at first prevents the growth of a criminal law. . . . When the Roman community conceived itself wronged, the state avenged itself by a single act on the individual wrongdoer. . . . The trial of a criminal was a proceeding wholly extraordinary, wholly irregular, wholly independent of settled rules and fixed conditions."

Crime includes misdemeanors. It is important that we should recognize this truth. There is no fixed line of moral heinousness beyond which all acts are crimes. That which is punished as a most serious offense in one age is often a simple misdemeanor in another, or perhaps no crime at all. On the other hand, harmless actions or petty misdemeanors of ancient days are now among our most troublesome and dangerous crimes. Is adultery a crime, misdemeanor, or civil injury? In New York it is legally a crime; in England, more of the nature of a tort, and in some countries it is simply a sin, unpunished by the law. Our ancestors very lightly regarded most forms of forgery and fraud, malicious injuries to property, painful wounds, and attempts at murder. We deem them serious crimes. What shall we say of drunkenness, of the sale of intoxicants, of failure to have one's children educated? Most people see nothing immoral in such conduct, but a few states have made these actions criminal in recent years. The moral sense and intelligence of the community

decide such questions, according to social needs, upon the plane of development attained.

The definition of "crime" in the American and English Encyclopædia of Law (1898) is framed to include misdemeanors. On page 248 we read: "Although in common usage the word 'crime' commonly denotes such offenses as are of a deep and atrocious die, and similar faults and omissions of less consequence are comprised under the name of misdemeanors, yet 'crime' and 'misdemeanor' in legal language are synonymous terms, and the word 'crime' in a statute has frequently been held to include misdemeanors."¹ This is clearly recognized in the Report on Forgery, by the Select Committee on the Criminal Law of England (1827). "Forgery is made *criminal* by the common law, and by various statutes. At common law it is a misdemeanor only; under the statutes it is frequently a felony. But, unless in raising the crime to a higher class," etc. (p. 1.)

Sir James Fitzjames Stephen writes: "A large number of misdemeanors were created by statute at different times, but especially in the 18th and 19th centuries, which differ in no essential respect from the common crimes distinguished as felonies. For instance, to obtain goods by false pretenses, to misappropriate securities intrusted to the offender as agent, solicitor, or banker, and to commit many other fraudulent or mischievous acts, are, *as far as moral guilt is concerned*, on a level with theft."²

It is very necessary that we should grasp clearly the distinction between tort, sin, crime, and acts of war. The field of crime has spread to such an extent as to cover many actions formerly classed under these other heads.

A tort is essentially a private injury as distinguished from a public wrong. It is a harm inflicted by a man upon his fellowman,

¹ *Crime includes misdemeanors.* England: *Maine v. Owen*, 9 B. & C. 595; 17 E. C. L. 456. New York: *Matter of Clark*, 9 Wend. (N.Y.) 212. Pennsylvania: *Lehigh County v. Schock*, 113 Pa. St., 373. Illinois: *Van Meter v. People*, 60 Ill. 168. For many more such decisions, see page 250, American and English Encyclopædia of Law (1898).

² History of the Criminal Law of England, Vol. I, p. 489. The criterion of a delete or tort is that "the person who suffers it, and not the state, is conceived to be wronged." (Maine, p. 371.)

not regarded as a wrong done the state, but giving rise to a civil suit for damages. In ancient times the injured man would have sought private vengeance, and a blood feud might have resulted. Later it became customary to accept arbitration and pecuniary composition. Society gave to this arbitration a legal form and made the acceptance of the damages awarded compulsory, unless the plaintiff chose not to press his suit. Thus, for a tribesman to kill or steal from a man of another clan within his own tribe was a tort demanding vengeance or compensation.

A sin is an offense against God, frequently punished as a crime by men. To kill one's blood brother was a fearful sin, punished by the community with the dread social doom of outlawry.

To kill or steal from a member of another tribe was an act of war, the weakening of a natural enemy and consequently praiseworthy. It was only very slowly and gradually that theft, murder, robbery, and rape (within the social group) became crimes; regarded not merely as misfortunes or harms to an individual but chiefly as wrongs to society itself, to be punished by society, utterly irrespective of the wishes of the persons chiefly concerned.¹

Primitive man was, as Aristotle has well said, "the hardest of all animals to govern." The European Aryan was a sturdy individualist, passionate, rebellious at restraint, loving war and vengeance as his duty and his right,—as that which makes a man. The blood feud had its use. It tended to consolidate the family group and to develop responsibility. It was a rough and terrible means of preserving peace; for even the boldest man would hesitate before bringing the vengeance of an entire kindred upon his house from generation to generation. It was also a weighty reason for the developing of strength, courage, and weapon skill. Every hand must guard its own head and every freeman his own home. Thus it made for social stability and warlike power.

¹ Maine (pp. 370-371) and *Encyclopædia Britannica* (article on Crime): "In very primitive tribes, murder, robbery and rape, are not crimes,—not at least in the modern sense."

The tribal state was but a weak institution, chiefly for military purposes. It punished a few acts as crimes because they had to be punished if the social group was to hold together, but at first it dared not interfere with individual vengeance, the right of private war.¹ Arbitration and composition for harm were very early offered as a substitute for blood revenge, but even when the state became strong enough to make arbitration compulsory, it yet preserved for long (in its trials) the semblance of a purely voluntary agreement.²

What primitive society needed most was strong, despotic law, to bind it firmly together, and give it strength and power to grow. Such law was most difficult to create and to enforce.³ It formed first where most needed, strengthening the outer shell of association, hardening the tribe for war. Just as in the evolving sphere of earth the outside crust forms and hardens first, while the inside matter is yet hot and molten, so in primitive human society the outside shell of legal custom hardened over the unruly passions of men unused to restraint, whose explosive natures were continually driving them into fierce words and bloody deeds.⁴ In this stage of development, writes Steinmetz, there is as yet a kind of indifference to internal affairs, and only occasional punishment of differing characters (by death, expulsion, or the like) takes place. The moral and disciplinary consideration of crime is entirely absent. There is as yet no proper compulsory state power.⁵ Actions considered crimes were necessarily very few, while intense popular abhorrence and "almost physical loathing" of the criminal must have made him a very rare type of man.⁶ Only the necessity for internal peace (for the blood feud was simply civil war socially sanctioned) strengthened the hands of society to substitute compulsory arbitration and composition for private vengeance, at a time when the development of wealth made compensation possible, and the increasing cultivation of the soil made internal

¹ Hearn, pp. 430-431.

² Steinmetz, Book II, chap. v.

³ Maine, p. 374.

⁴ Maine, p. 120.

⁵ See Bagehot's *Physics and Politics*, p. 21, and Hearn, p. 393.

⁶ Hearn, pp. 430-432.

peace more and more indispensable.¹ Composition became a favorable factor in the struggle for existence, and society, by gradually changing certain torts into crimes, intrenched itself, as it were, on a higher plane of human existence. The number of acts punished as crimes was increased. The number of criminals was greatly multiplied, but social welfare was conserved and individual security and freedom were enlarged.

No depth of moral heinousness is sufficient in itself to make an action criminal. Sin is never crime unless society makes it such. The mere fact that laws exist decreeing punishment for certain conduct will not make that conduct criminal. In the statute books of England and the United States, there are many penal statutes (Blue Laws) never repealed, but unenforced for generations. The acts they were aimed to punish are certainly not crimes now, and they may never have been crimes. For it is not sufficient that society desire to punish, make laws to punish, or even try to punish. Unless it actually *succeeds* in punishing, often enough to make the average citizen believe offenders likely to be brought to justice, the act is not yet a true crime. On the other hand, social punishment need not fall upon a majority of offenders to make their conduct criminal. In the United States to-day, comparatively few men are executed, or imprisoned, for the many murders committed; but the average citizen, not called upon to investigate such matters closely, does not realize this, and believes that "murder will out," and in general be punished. Laws need not exist and be enforced to make the actions they prohibit crimes. Lynch violence may do the work neglected by the courts of justice.

The essentials of crime are two: First, the act must be one that society abhors and desires to punish as a wrong against its welfare. Second, the act must be punished often enough to make the displeasure of society evident and its deterrent force plainly felt. Then, and not till then, does the action become a crime. But if society is at all united in the intention to punish, it will generally succeed in inflicting some form of penalty, and this the more surely as social organization becomes stronger and more effective.

¹ Steinmetz, Book I, pp. 427-428; also Hearn, p. 393.

For it is *the social standard of right action that determines what conduct shall be criminal*. Society says: You must live up to a certain standard, at your peril. The test is essentially an objective one, and deals with manifest conduct, not the motive behind the act. A man thoroughly bad morally need not fear punishment if he keep within the letter of the law. Again, it matters not how good a man's intentions may be, if he breaks the law he will be punished as a criminal; for society thinks he ought to have known better, unless, indeed, he prove idiotic or insane.¹ The standard is not fixed and unchanging, but is modified from age to age, according to the general level of knowledge, intelligence, and social morality, and the actual needs of an advancing civilization.

Social evolution implies increasing complexity of life, a larger interdependence among men, and necessitates a nicer adjustment of mutual rights and duties, which must be enforced (largely through the criminal law), if society is to hold together and maintain a healthy growth. "Man, unlike the lower animals, has had to be his own domesticator."²

The criminal is the rebellious social laggard and must in some way be prevented from destroying, or seriously harming, the social life. There are many ways of accomplishing this end: by his death, imprisonment, education, reformation; but all are forms of punishment³ for the man who refuses to live up to the standard of right action set by his fellow-men, and the social welfare imperatively demands that such rebels be punished. With increasing civilization, more and more actions become socially bad, are perceived to be injurious by the common sense of the community, and are punished as crimes, thus increasing the number of criminals.

So long as social progress continues, so long as there is growth from a lower to a higher plane of brotherly love and mutual helpfulness, so long as the rebellious social laggard continues upon

¹ Holmes, pp. 110-113.

² Bagehot, p. 51.

³ See the hatred of Elmira and other reformatory prisoners for education, the parole system, and the indeterminate sentence.

earth, for so long will crime continue to exist and possibly also to increase.¹ That it has increased till now this book will give the evidence, so far, at least, as the English-speaking people is concerned. But the nature of crime has changed and will continue to change, from more to less heinous offenses, if we judge from the standpoint of present public opinion. Under the rule of law men have been slowly and painfully learning to curb their hasty passions. Crimes of force show a very great decrease during the last few centuries, and they are decreasing still.

If crime shall ever cease upon earth, it can be only when obedience to social commands has become an overmastering habit in the individual;² when society has grown so wise as to prohibit only the true crimes of its age; so strong and efficient that the mere dread of its displeasure is quite enough for the prevention of evil acts; when, in a word, the aim of Christianity, the brotherhood of man, is realized on earth. Then social morality can rise to higher and higher planes without increasing crime. Hitherto the social mind has had in every age *le défaut de ses qualités*, and has punished or tried to punish as crimes actions helpful or at least not harmful to the social welfare.³

It is an old truth that the greatest benefactors of the world have been also its greatest martyrs. New liberty, new life, have come to men often under a criminal ban. Are we wiser than our fathers? Do we no longer make these old mistakes? Thus much seems sure. The nation that persists in choosing its crimes wrongly is on the highroad to social degeneration and destruction;

¹ If in any age and nation a larger amount of crime is punished than in a later and higher stage of social development, it is probably because actions not rightly criminal are being punished in the former time, or because degeneration, which often brings nonpunishment for even very dangerous offenses, is setting in at the latter period.

² A condition practically fulfilled among lowest savage tribes, where obedience to a few fundamental ancient customs is thoroughly instinctive and unreasoning, because run into the very fiber of the race, by stern processes of natural selection, teaching elementary social necessities.

³ The Statutes of Laborers in England, the subsequent attempts to make labor unions criminal, and the punishments of the Inquisition in Spain will serve as examples; as will also the attempts, in our own day, to make trusts as such criminal, and not simply the abuses of trusts.

and since the English-speaking people has continued to grow more strong, more united, more dominant upon the earth, we may believe that it has, upon the whole, through many errors, chosen its crimes rightly, and that it will continue to be, through coming years, the great teacher of Christianity and of civilization.¹

¹ A crime and a form of crime express two closely related yet diverse ideas, between which we should distinguish clearly. A crime is an act, the act of a criminal, punished by society as a wrong against itself. A form of crime is a kind of conduct which society would punish in this manner, if the act were perpetrated, if the criminal existed. Thus treason is and has always been (as far back as we can trace) a most heinous form of crime among men. Throughout the centuries acts of treason have been very frequent, and severely punished as crimes; but among lowest savage hordes and the most highly civilized modern nations we find almost no instances of punishment for this offense. The traitor has practically disappeared from the English criminal statistics during the last half century, and abhorrence of the traitorous act is so intense among lowest savages that no one is found to commit this most heinous of crimes. A form of conduct may therefore be criminal without the actual infliction of social punishment, but such instances are very rare. Piracy is an example for modern times.

We may dream of a nation, in some future age, when even a new form of crime may not necessarily mean an increase of criminals. With us, the transgressor is so very natural and customary a result of the prohibition that we expect him as a matter of course, and are never pleasantly disappointed by his nonappearance. He is not, however, an absolutely inevitable social product, provided knowledge, intelligence, and morality are high and strong enough, and the habit of obedience dominant enough in the social group.

XXVIII

MALE SEXUAL SELECTION¹

Before proceeding to consider the various forms of marriage, it will be necessary to advert to a very important biological fact which has constituted one of the results of the development in man of his greatly superior psychic faculties. This fact is what may be called male sexual selection, or the transfer to the male sex of the sexual selective power exercised in the lower animals and in primordial man by the female.

The higher a being rises in the scale of development, the more sensitive become all its faculties and organs. Just as the raw pabulum of animals will not suffice for man, and the rude preparation of food by the savage fails to satisfy the more refined palate of civilized man, so the development and refinement of all the faculties of man in his gradual emergence out of animality into humanity, and his elevation from barbarism to civilization, lead him more and more to select his companions as well as his food, and beget preferences in the objects of sexual as well as of gustatory and all other species of gratification. Much as may be, and doubtless is, due to the effects of the selection of the female sex in effecting morphological changes, it is still to the selection of the male sex that must be ascribed the greater part of those sociological phenomena which belong to the domain of the reproductive forces.

In fact, it is here that is to be detected one of the few distinct and tangible facts which serve to separate man from the brute creation. According to the law just enunciated, by which increased intelligence manifests itself in the direction of the subjection of woman to man, her power of selection, so freely and constantly exercised in the animal state, is taken away, and

¹ From *Dynamic Sociology*, by Lester F. Ward, Vol. I, pp. 613-615 (copyright, 1898, by D. Appleton & Co., New York).

she loses that supremacy which she formerly held. Then, and throughout the animal world, the female sex controlled the male in all matters pertaining to sex, haughtily declining and successfully rejecting the advances of the latter when not reciprocated. But the female of the human race has lost this scepter, has yielded to the cunning appeals of her male companion to her imagination and her reason, and little by little surrendered both her mind and body to his control. Once she ruled over him by reason of his passion, which prompted him to make perpetual demands upon her for the favor that she alone could confer; now he rules over her body and soul by reason of a thousand desires within her, which prompt her to make perpetual demands upon him, as lord of the universe, for that protection and those favors which he alone can confer. The transition from the animal to the human state has wrought a complete revolution in all the sexual relations, and transferred the selective power absolutely from the female to the male sex. In no other department has there been so great a reversal of natural law.

This important fact of the transition, in man alone of all animals, from female to male selection may not only be plainly seen in its direct results, but is significantly attested in certain of its indirect ones. Among others, it is interesting to observe that just as the form of sexual selection is the opposite in man from what it is in the lower animals, so, as indeed might be expected, the male beauty, due to female selection in the latter, becomes female beauty due to male selection in the former, — a fact which at once affords a striking proof of this transition, and of the modifying power of the selective process.

It is interesting to note that here again, as so many times before, we see in the progress of true civilization the unmistakable tendency toward the ultimate restoration of the primeval state of nature. Once more the cyclical character of our artificial social system is clearly revealed. Even in our own times we are beginning to observe the most unmistakable signs of the eventual resumption by woman of her lost scepter, and of her restoration to that empire over the emotional nature of man which the females of nearly all other animals exercise.

XXIX

ETHNIC STRATIFICATION AND URBAN SELECTION ¹

The extreme fluidity of our heterogeneous population is impressed upon us by every phenomenon of social life here in America. We imagine the people of Europe, on the other hand, after scores of generations of stable habitation, to have settled themselves permanently and contentedly into place. This is an entirely erroneous assumption. As a matter of fact, they are almost as mobile as our own American types. There are two ways in which demographic crystallization may have taken place. A people may have become rigid horizontally, divided into castes, or social strata; or it may be geographically segregated into localized communities, varying in size all the way from the isolated hamlet to the highly individualized nation. Both of these forms of crystallization are breaking down to-day under the pressure of modern industrialism and democracy, in Europe as well as in America. Nor is it true that the recency of our American social life has made the phenomena of change more marked here than abroad. In fact, with the relics of the old *régime* on every hand, the present tendencies in Europe are the more startling of the two by reason of the immediate contrast. Demographic processes are at work which promise mighty results for the future. These are not cataclysmic, like the French Revolution; but being well-nigh universal, the fact that they are slow moving should not blind us to their ultimate effects. Such movements threaten to break up not only the horizontal social stratification but the vertical geographical cleavage of locality and nationality as well. Obviously any disturbance of these at once involves destruction of the racial individuality of the continent at the same time. For

¹ From *The Races of Europe*, by William Z. Ripley, chap. xx (copyright, 1899, by D. Appleton & Co., New York).

this reason, many phases of social analysis appertain directly to the sphere of natural science. The anthropologist and sociologist alike are called upon to take cognizance of the same phenomena. The physical and social sciences are equally involved in the determination of their laws. Certain problems of city life are foremost among these questions which lie on the border line between what were once widely separated sciences.

The most conservative societies in Europe are really to-day a seething mass of moving particles, viewed with the statistical eye. To borrow a familiar figure, a great population almost anywhere is like the atmosphere; even when apparently most quiescent, in the sunlight of investigation revealing itself surcharged with myriad notes in ceaseless agitation. These particles, microscopic or human, as the case may be, are swept along in currents determined both in their direction and intensity by definite causes. With men, the impelling forces are reducible mainly to economic and social factors. Most powerful of these movements of population to-day is the constant trend from the rural districts to the city. Its origin is perfectly apparent. Economically it is induced by the advantages of coöperation in labor; perhaps it would be nearer the truth to say, by the necessity of aggregation imposed by nineteenth-century industrialism. This economic incentive to migration to the towns is strengthened by the social advantages of urban life, the attractions of the crowd; often potent enough in themselves, as we know, to hold people to the tenement, despite the opportunity for advancement, expansion, or superior comfort afforded elsewhere outside the city walls. The effect of these two combined motives, the economic plus the social, is to produce a steady drift of population toward the towns. This has a double significance. It promises to dissolve the bonds of geographical individuality, nay, even of nationality; for a political frontier is no bar against such immigration, provided the incentive be keen enough. At the same time it opens the way for an upheaval of the horizontal or social stratification of population, since in the city advancement or degradation in the scale of living are alike possible, as never in the quiet life of the country.

The sudden growth of great cities is the first result of the phenomenon of migration which we have to note. We think of this as essentially an American problem. We comfort ourselves in our failures of municipal administration with that thought. This is a grievous deception. Most of the European cities have increased in population more rapidly than in America. Shaw has emphasized the same fact in his brilliant work on *Municipal Government in Europe*. This is particularly true of great German urban centers. Berlin has outgrown our own metropolis, New York, in less than a generation, having in twenty-five years added as many actual new residents as Chicago, and twice as many as Philadelphia. Hamburg has gained twice as many in population since 1875 as Boston; Leipsic has distanced St. Louis. The same demographic outburst has occurred in the smaller German cities as well. Cologne has gained the lead over Cleveland, Buffalo, and Pittsburg, although in 1880 it was the smallest of the four. Magdeburg has grown faster than Providence in the last ten years. Düsseldorf has likewise outgrown St. Paul. Beyond the confines of the German Empire, from Norway to Italy, the same is true. Stockholm has doubled its population; Copenhagen has increased two and one-half times; Christiania has trebled its numbers—in a generation. Rome has increased from 184,000 in 1860 to 450,000 in 1894. Vienna, including its suburbs, has grown three times over within the same period. Paris, from 1881 to 1891, absorbed four fifths of the total increase of population for all of France within the same decade.

Contemporaneously with this marvelous growth of urban centers, we observe a progressive depopulation of the rural districts. What is going on in our New England States, especially in Massachusetts, is entirely characteristic of large areas in Europe. Take France, for example. Most of us are aware of the distressing demographic condition of affairs in that country. One of the finest populations in Europe is almost at a standstill numerically; nay, some years show an actual decrease of population. This is not due to emigration abroad, for the French are notably backward in this respect. Nor can it be ascribed to a heavy mortality. The death rate has appreciably fallen during

this century, in conformity with the great advances made in hygiene and sanitation. The marriage rate is not lower than usual. Yet for some reason children do not come to cheer the land. The practical result is that Germany, the great political rival, seems destined to control the European military situation in future. Such is the condition, viewing the country as a whole. Studying it in detail, the evil is still more magnified; for, with a stationary population for the entire country, the cities continue to grow, draining the lifeblood of the rural districts year by year, with ever-increasing vigor. The towns are absorbing even more than the natural increment of country population; they are drawing off the middle aged as well as the young. Thus great areas are being actually depopulated. For example, in the decade from 1881 to 1891, the French cities of thirty thousand inhabitants or over added to their respective numbers more than three times as many as the total increase of population for the entire country. Even their due proportion of the abnormally slow increase was denied to the rural districts; the ten years left them less densely populated than before. In 1846 almost half of the eighty-eight departments in France had a larger population than they have to-day. Paris alone, the metropolis, has, as we have already observed, absorbed four fifths of the entire increase of the population during the decade to 1891; the remainder was added to the other large cities in proportion to their size. The British Isles exemplify the same tendency. More than half of the English towns with populations over twenty-five thousand are the product of this century. Sixty out of one hundred and five of these cities have arisen since 1825. This is, of course, due to the extension of the factory system in great measure. The same depopulation of the rural districts is noted. Ten rural counties in England and Wales alone have fewer inhabitants than in 1851. The fact is that Western Europe is being gradually transformed into a huge factory town. It is being fed less from the products of its own territory. The wheat fields of the Americas, India, and Australia are contributing what formerly was raised by the peasantry at home. It is not surprising that the trend is toward the cities.

This growth of city population has, then, taken place largely at the expense of the country. It must be so, for the urban birth rates are not enough in excess of the mortality, save in a few cases, to account for more than a small part of the wonderful growth which we have instanced. The towns are being constantly recruited from without. Nor is it an indiscriminate flocking cityward which is taking place. A process of selection is at work on a grand scale. The great majority to-day who are pouring into the cities are those who, like the emigrants to the United States in the old days of natural migration, come because they have the physical equipment and the mental disposition to seek a betterment of their fortunes away from home. Of course, an appreciable contingent of such migrant types is composed of the merely discontented, of the restless, and the adventurous; but in the main the best blood of the land it is which feeds into the arteries of city life.

Another more certain mode of proof is possible for demonstrating that the population of cities is largely made up either of direct immigrants from the country, or of their immediate descendants. Dr. Ammon, of Carlsruhe, in a most suggestive work which we have constantly cited in these pages, has carefully analyzed in detail the populations of certain representative cities in Baden. In Carlsruhe and Freiburg, for example, he found that among the conscripts examined for military service an overwhelming proportion of the residents were either immigrants themselves or else the children of immigrants. Less than eight per cent, in fact, were the children of city-born parents, — that is to say, were the outcome of three generations of continued urban residence. In a similar investigation of other German cities, Hansen found that nearly one half their residents were of direct country descent. In London it has been shown that over one third of its population are immigrants, and in Paris the same is true. For thirty of the principal cities of Europe it has been calculated that only about one fifth of their increase is from the loins of their own people, the overwhelming majority being of country birth. One direct result of this state of affairs is that cities as a rule contain more than their due proportion of middle-aged adults.

They do not immigrate until they have attained majority; they do not marry till comparatively late in life, so that children and young persons form an unusually small percentage of the entire population. The aged, moreover, often betake themselves to the country after the stress of life is abated. They return to their place of birth, there to spend the last days in peace. These latter, together with those who are driven back to their homes by the fierce competitions of city life, constitute a certain feeble counter-current of migration from the city outward. Yet this is insignificant compared with the inflowing tide. Thousands are yearly pouring into the towns, while those who emerge may be numbered by hundreds, perhaps even by scores. The fact is that the great majority of these immigrants either fall by the way, or else their line, lacking vitality, dwindling in numbers either through late marriages and few children, or perhaps the opposite extreme of overproduction and abnormal mortality, comes to naught in a few generations. Thus the steady influx of immigration goes on. Truly, cities are, as has been observed, "consumers of population." Our problem here is to determine whether such consumption is being applied equally to all our racial types; if not, the future of Europe, ethnically, cannot but be profoundly affected. The future character of European peoples will be largely determined by this circumstance. From the point of view of relative increase, the German nation is undoubtedly in the lead, especially as compared with the French. Equally important, however, is it to consider the relative destruction which is annually being waged. If, as is asserted, these prolific Teutons are preëminently a city type, and if thereby they lay themselves open to decimation, the future balance of power in Europe may not be so completely disturbed after all.

These various social phenomena have been most ably correlated in a rather suggestive broad-line sketch of a mode of social selection given by Hansen. Basing his hypothesis upon data derived in the main from the cities of Germany, he distinguishes in any given population what he designates as three degrees of vital and psychic capacity respectively. The vitality is measured in each class by the ratio of the birth to the death rate. The

first vitality rank consists of the well-to-do country people, leading a tranquil existence, healthy in mind and body, free alike from dread or aspiration. This class increases rapidly by birth, and loses relatively few by premature mortality. It has enough and to spare in numbers. Both country and city alike depend upon it for future growth. Below this is a second vitality rank, composed of the middle classes in the towns. Herein we find a somewhat lower birth rate; ambition and possibility of social advancement become effective in limiting the size of families. Coincident with this is a low death rate, owing to material comfort and a goodly intelligence. This class holds its own in numbers, perhaps contributes slightly to swell the census returns from year to year. Below this lies the third vitality rank, composed of the great mass of the urban populations, the unskilled labor and the poorer artisans. Here occur an abnormally high birth rate, little self-restraint, and, through ignorance and poverty, an inordinately high rate of mortality. This is the portion of the city population continually recruited from the country or through rejects from the superior classes, — those, that is to say, who fail in the intense competition of the upper grades of society. Measured by vitality alone, it would appear that the first rank we have described — the average country population — was the ideal one. Applying, however, the tests of intellectual capacity, Hansen discovers curious cross-cleavages. For the country population is being continually drained of its best blood, — those who are energetic or ambitious in the majority of cases leaving their homes to seek success in the city. Thus an intellectual residuum is left on the soil, representing merely the average intelligence; perhaps, if near a great metropolis, even falling below the normal in this respect. Those in their turn who emigrate to the towns are speedily sorted by inexorable fate. Some achieve success; the majority perhaps go to swell the other middle classes; or else, entirely worsted in the struggle, land in a generation or two in the lowest ranks of all. Thus a continual tide of migration becomes necessary to insure stability in numbers in the entire population. This ingenious scheme, too simple of course to be entirely correct, as Giddings has suggestively pointed out, does

nevertheless contain a germ of truth. Our problem is to test its applicability to modern conditions by a study of purely anthropological facts.

The first physical characteristic of urban populations, as compared with those of country districts, which we have to note, is their tendency toward that shape of head characteristic of two of our racial types, Teutonic and Mediterranean respectively. It seems as if for some reason the broad-headed Alpine race was distinctly a rural type. This we might have expected from the persistency with which it clings, as we have seen all over Europe, to the mountainous or otherwise isolated areas. Thirty years ago an observer in the ethnically Alpine district of south central France noted an appreciable difference between town and country in the head form of the people. In a half dozen of the smaller cities his observations pointed to a greater prevalence of the long-headed type than in the country round about. In the same year, in the city of Modena, in Italy, investigations of the town and country populations, instituted for entirely different purposes, brought the same peculiarity to light. These facts escaped notice, however, for about a quarter of a century. In entire ignorance of them, in 1889 a gifted young professor in the University of Montpellier in southern France, having for some years been occupied in outlining various theories of social selection, stumbled upon a surprising natural phenomenon. On examination of a considerable series of skulls, dating from various periods in the last two hundred years, which had been preserved in crypts at Montpellier, he found that the upper classes as compared with the plebeian population, contained a much larger percentage of long-headed crania. These crania of the aristocracy, in other words, seemed to conform much more nearly to the head form of the Teutonic race than those of the common people. Additional interest was awakened in the following year by the researches of Dr. Ammon, of Carlsruhe, who, working again in entire independence upon measurements of thousands of conscripts of the grand duchy of Baden, discovered radical differences here between the head form in city and country, and between the upper and lower classes in the larger towns. Several

explanations of this were possible. The direct influence of urban life might conceivably have brought it about, acting through superior education, habits of life, and the like. There was no psychological basis for this assumption. Another tenable hypothesis was that in these cities, situated, as we have endeavored to show, in a land where two racial types of population were existing side by side, the city for some reason exerted superior powers of attraction upon the long-headed race. If this were true, then by a combined process of social and racial selections, Carlsruhe, Freiburg, Mannheim, and the other towns would be continually drawing unto themselves that tall and blond Teutonic type of population which, as history teaches us, has dominated social and political affairs in Europe for centuries. This suggested itself as the probable solution of the question; and investigations all over Europe during the last five years have been directed to the further analysis of the matter. This was not an entirely new discovery even for Germany; the same fact had been previously noted in Würtemberg, that the peasantry were noticeably rounder-headed than the upper classes. Yet Ammon undoubtedly first gave detailed proof of its existence, basing it upon a great number of physical measurements; and he undoubtedly first recognized its profound significance for the future. To him belongs the honor of the discovery of the so-called "Ammon's law," that the Teutonic race betrays almost everywhere a marked *penchant* for city life. This is all the more surprising, as Tacitus tells us that the ancient Germans, unlike the Italians, were strongly imbued with a hatred of communal existence. We have no time to give in detail all the evidence which has been accumulated in favor of its validity. The fact of greater frequency of the long-headed type in town populations, as compared with rural districts, has been established by Lapouge in a great number of investigations all through central and southern France, and in Brittany his data are being confirmed by Muffang. Collignon, foremost authority upon the physical anthropology of France, gives his adherence to it as a general rule, finding it applicable to Bordeaux and nearly all the cities of the southwest. It is true of Paris and Lyons especially, the department of the

Seine being well below the average for France and for the neighboring departments. It seems to hold true in Vienna, which with its suburbs forms a little islet of Teutonic long-headedness in Austria, and Ranke has proved the same for Munich. In northern Italy the long-headedness is almost universally more prevalent in all the cities, although the opposite is more often true south of Rome. In Spain the only indication of the law is offered by Madrid, where nearly seven hundred conscripts have been measured in detail. In this latter country, as in the British Isles, in southern Italy, as we have observed, and in Scandinavia, — everywhere, in fact, on the outskirts of Europe where the Alpine broad-headed race is but sparsely represented, we find the contrasts in head form between city and country absent in great measure. Observations on nearly five hundred American college students have not yielded me any differences in this respect. Only where the Alpine race forms an appreciable element in the population does "Ammon's law" appear to hold true.

The circumstance which we have mentioned, that only in those portions of Europe where the Alpine broad-headed type is strongly in evidence do we find a more prevalent long-headedness in the city populations, suggests a criticism, first made by Livi in his superb monograph on Italy, upon the somewhat extravagant claims to the universality of "Ammon's law" made by ardent disciples of the school of so-called "anthropo-sociologists." It is this: City populations are the inevitable result of great intermixture of blood; they of necessity contain a hodge-podge of all the ethnic elements which lie within the territory tributary to them, which, in other words, lie within what Lapouge has aptly termed their "spheres of attraction." As a whole, one should not expect to find the extreme individuality of type in the cities which can persist alone in the isolated areas free from ethnic intermixture. If as in Baden, in Brittany, or along the Rhone valley, an extremely broad-headed type of population is localized in the mountains, as we know it is all over Europe, while along the rivers and on the seacoast are found many representatives of an immigrant Teutonic long-headed people, it would not be surprising that cities located on the

border line of the two areas should contain a majority of human types intermediate between the two extremes on either side. These city populations would naturally be longer headed than the pure Alpine race behind them in the mountains, and coincidentally broader headed than the pure Teutons along the rivers and on the seacoast. The experience of Italy is instructive. In this country the transition from the pure Alpine broad-headed population in the north to an equally pure and long-headed Mediterranean type in the south is perfectly regular. It has been established that while the cities in the north are less broad headed than the country, in mid-Italy no appreciable difference between the two exists; and in the south, the cities, being ever near the mean for the country as a whole, actually contain fewer long-headed individuals than the rural districts. This consideration, which no statistician can fail to keep in mind, seems, however, to be insufficient to account for the entire phenomenon, especially north of the Alps. We are forced to the conclusion, in other words, that there is some mental characteristic of the long-headed race or types—either their energy, ambition, or hardiness—which makes them peculiarly prone to migrate from the country to the city; or else, what would compass the same result, a peculiar disinclination on the part of the broad-headed Alpine race of central Europe thus to betake itself to the towns. The result in either case would be to leave the fate of the urban populations to be determined more and more by the long-headed type.

A second mode of proof of the peculiar tendency of the long-headed type to gravitate toward the city is based upon the detailed study of individuals, tracing each person from his place of birth, or from generation to generation, from the rural origin to the final urban residence. Dr. Ammon divided his conscripts into three classes: first, the *urban*, those whose fathers were of city birth, as well as themselves; second, the *semi-urban*, comprising those born in cities, but whose fathers were immigrants from the country; and, third, the *semi-rural*, who, born in the country, had themselves taken up an abode in the city. Comparing these three classes with those who were still domiciled in the

country, a regularly increasing long headedness was apparent in each generation. Lapouge and his disciples in France are now collecting much valuable information upon this point, which cannot fail to be suggestive when accumulated in sufficient amount. Everything goes to prove a slight but quite general tendency toward this peculiar physical characteristic in the town populations, or in the migratory class, which has either the courage, the energy, or the physical ability to seek its fortunes at a distance from its rural birthplace.

Is this phenomenon, the segregation of a long-headed physical type in city populations, merely the manifestation of a restless tendency on the part of the Teutonic race to reassert itself in the new phases of nineteenth-century competition? All through history this type has been characteristic of the dominant classes, especially in military and political, perhaps rather than purely intellectual, affairs. All the leading dynasties of Europe have long been recruited from its ranks. The contrast of this type, whose energy has carried it all over Europe, with the persistently sedentary Alpine race is very marked. A certain passivity or patience is characteristic of the Alpine peasantry. This is true all the way from northwestern Spain, where Tubino notes its degeneration into morosity in the peasantry, as far as Russia, where the great inert Slavic horde of northeastern Europe submits with abject resignation to the political despotism of the house of the Romanoffs. Ordinarily a negative factor in politics, always socially conservative, this race when once aroused becomes irresistible. As a rule, not characterized by the domineering spirit of the Teuton, this Alpine type makes a comfortable and contented neighbor, a resigned and peaceful subject. Whether this rather negative character of the Alpine race is entirely innate, or whether it is in part, like many of its social phenomena, merely a reflection from the almost invariably inhospitable habitat in which it has long been isolated, we may not pretend to decide.

The peculiar temperament of the Alpine population comes to the surface in political affairs, being attested by great conservatism.

This reactionary instinct is in the long run far more common to all human nature, I believe, than is generally supposed; in the Alpine Celt it is developed or conserved, if you please, to a marked degree. Socially, the peculiarities of disposition we have mentioned are of even greater importance. In fact, the future of the type depends largely upon this circumstance. The most persistent attribute of the Alpine Celt is his extreme attachment to the soil, or, perhaps better, to locality. He seems to be a sedentary type *par excellence*; he seldom migrates, except after great provocation, so that, once settled, he clings to his patrimony through all persecution, climatic or human. If he migrates to the cities, as does the "mobile" Teuton, he generally returns home to the country to spend his last days in peace. Such re-emigration of the Alpine type late in life is in fact offered by Collignon as the main explanation for the prevalence of the long-headed variety in the towns to-day. He inclines to this view rather than to the theory that it is due to the greater number of the immigrant Teutons, as Ammon and Lapouge are disposed to maintain. At all events, whichever explanation be true, the fact that mental differences between our racial types exist, if they become accentuated with the ever-increasing pressure of civilization, cannot but profoundly affect the future complexion of European populations. A phase of racial or social competition of such magnitude that we hesitate to predict its possible effects is at once suggested.

Let us now for a moment take up the consideration of a second physical characteristic of city populations, viz. stature. Some interesting points are concerned herein. The apparently contradictory testimony in this respect becomes in itself highly suggestive, I think, for the student of social problems. A few of the older observers found that city populations sometimes surpassed those of the country in the average of bodily height. Thus Quetelet and Villerme discovered such a superiority of stature in the Belgian cities, amounting to several centimeters. From this coincidence Quetelet derived a law to the effect that the superior advantages of urban residence were directly reflected in the physical development of the people. This hypothesis is now

definitely disproved by nearly all the data available. Ammon, in Baden, to be sure, finds a higher average stature in the larger towns of that duchy. He ascribes it to a greater frequency of the tall Teutonic type. Switzerland, also, has the taller populations, as a rule, in its cities. Thus Berne, Lucerne, Zurich, Basle, Lausanne, and Neuchâtel all yield average statures appreciably above those in their respective cantons. In Basle the superiority of the townsmen is upward of three centimeters; that is to say, about an inch and a quarter. With the sole exception of these two countries and of three cities in Hungary, the exact opposite of this rule is demonstrated by all the later investigations. If there be a law at all in respect of average statures, it demonstrates rather the depressing effect of city life than the reverse. For example, Hamburg is far below the average for Germany; Dunant finds it true in Geneva; Pagliani observed it in Turin. The city of Madrid contains almost the shortest male population in all Spain; only one province, Valladolid, standing slightly below it. Residents of its poorer quarters are absolutely the shortest in the entire peninsula. From Franconia, Bavaria, and Alsace-Lorraine comes corroborative testimony to the same effect. All over Britain there are indications of this law, that town populations are on the average comparatively short of stature. The townsmen of Glasgow and Edinburgh are four inches or more shorter than the country folk round about, and thirty-six pounds on the average lighter in weight. Dr. Beddoe, the great authority upon this subject, concludes his investigation of the population of Great Britain thus: "It may therefore be taken as *proved* that the stature of men in the large towns of Britain is lowered considerably below the standard of the nation, and as *probable* that such degradation is hereditary and progressive." This is not an invariable rule; as, for example, in Saxony and parts of France, where investigators have discovered no differences at all between city and country. Nevertheless, the trend of testimony is in favor of Beddoe's view, as a rule, especially when applied to the great modern factory towns, where contributory influences, such as professional selection and the like, come into operation.

A most important point in this connection is the great variability of city populations in size. All observers comment upon this. It is of profound significance. The people of the west and east ends in each city differ widely. The population of the aristocratic quarters is often found to exceed in stature the people of the tenement districts. In this case, both among Jews and Poles, variations in stature corresponding to those of social condition were proved beyond doubt. Manouvrier has analyzed the Parisians most suggestively in much the same way, showing the similar tendency upon his map. In Madrid, also, it appears that the well-to-do people are nearly two inches taller on the average than the residents of the poorer quarters. We should expect this, of course, as a direct result of the depressing influence of unfavorable environment. Yet there is apparently another factor underlying that, viz. social selection. While cities contain so large a proportion of degenerate physical types as on the average to fall below the surrounding country in stature, nevertheless they also are found to include an inordinately large number of very tall and well-developed individuals. In other words, compared with the rural districts where all men are subject to the same conditions of life, we discover in the city that the population has differentiated into the very tall and the very short. This is true in Hamburg; it holds good in many of the cities of Franconia, as Majer long ago established. Brandt has just proved the same in Alsace-Lorraine. Here, also, while the average statures in city and country are equal, the composition of each contingent is very different; for the relatively homogeneous suburban type is replaced in the cities by two components, one superior and one defective in height. Of these, the first is more conspicuous. Its presence has been oftener noted by observers. It is scarcely apparent in towns of minor importance, but the phenomenon becomes exaggerated in proportion to the size of the city. Anutchin's data for Russia brings this into strong relief. It is only in capital cities — St. Petersburg, Moscow, Kazan, and Sebastopol — that the excess of taller men raises the average above that of the surrounding country. In other cities no such superiority can be detected. This

perhaps is why Collignon finds Bordeaux above the average for Gironde, while La Rochelle, being a smaller place, is precisely like its department.

The explanation for this phenomenon is simple. Yet it is not direct, as in Topinard's suggestion that it is a matter of race or that a change of environment operates to stimulate growth. Rather does it appear that it is the growth which suggests the change. The tall men are in the main those vigorous, mettlesome, presumably healthy individuals, who have themselves, or in the person of their fathers, come to the city in search of the prizes which urban life has to offer to the successful. On the other hand, the degenerate, the stunted, those who entirely outnumber the others so far as to drag the average for the city as a whole below the normal, are the grist turned out by the city mill. They are the product of the tenement, the sweat shop, vice, and crime. Of course, normally developed men, as ever, constitute the main bulk of the population; but these two widely divergent classes attain a very considerable representation. As an example of the influence of such selection, Dr. Beddoe remarks upon the noticeably short stature of all the agricultural counties about London, being even less than in the metropolis itself. On the other hand, the Anthropometric Committee, measuring more among the upper classes in London, found them to exceed both in height and weight the peasantry in Hertfordshire, near by. This need not disprove Dr. Beddoe's assertion. In fact, the contradictory evidence is very valuable for that reason. The only way to account for it is to suppose that the constant draught upon these suburban populations for their most powerful men, for service in the neighboring city as policemen, porters, firemen, and in other picked professions, has depleted the land of all its best specimens. Such an inflowing current always tends cityward. Everything points to the conclusion, on the other hand, that the final product of the continued residence of such sorted populations in the city is to divide them into the chosen few who succeed and rise socially, and the many who descend, in the social scale as well as in stature, until their line becomes extinct. As they differentiate thus, they migrate

within the city. The few drift toward the West End, toward the Champs Élysées, or Fifth Avenue, where they maintain the high physical standard of the quarter; the others gravitate no less irresistibly toward Whitechapel and the Bowery.

We have seen thus far that evidence seems to point to an aggregation of the Teutonic long-headed population in the urban centers of Europe. Perhaps a part of the tall stature in some cities may be due to such racial causes. This was Topinard's explanation of it in part. A curious anomaly now remains, however, to be noted. City populations appear to manifest a distinct tendency toward brunetteness; that is to say, they seem to comprise an abnormal proportion of brunette traits as compared with the neighboring rural districts. The first notice of this is due to Majer, who, studying some seven hundred and sixty thousand school children in Bavaria, stumbled upon it unexpectedly. Although blondes were in a very decided majority in the kingdom as a whole, the cities all contained a noticeable preponderance of brunette traits. This tendency was strikingly shown to characterize the entire German Empire when its six million school children were examined under Virchow's direction. In twenty-five out of thirty-three of the larger cities were the brunette traits more frequent than in the country. In Metz alone was there a decided preponderance of blondes, due perhaps to the recent Germanization of Alsace-Lorraine as a result of political circumstances. Broadly viewed, all the larger cities, dating from the period prior to 1850, showed this brunette peculiarity in their school children. Quite independently, and in fact as early as 1865, Dr. Beddoe refers to the same fact as a matter of common report, finding it to hold good in the Rhine cities. His conclusions, however, were based entirely upon adults. Here again, as in the case of the head form, we must reckon with the fact that city populations are always by reason of intermixture a mean, intermediate between the extremes presented by the country at large. So in northern blond Hannover the cities should contain more dark traits than the country; in Bavaria, on the contrary, we should expect them, for this same reason, to be somewhat more blond. Nevertheless, this would not account for the dark hair in

certain Prussian cities, which contain more than twice as many dark as there are light traits ; and in Bavaria, as we have seen, the actual condition is exactly the reverse of what might have been statistically expected.

Austria offers confirmation of the same tendency toward brunetteness in twenty-four out of its thirty-three principal cities. Farther south, in Italy, it was noted much earlier that cities contained fewer blondes than were common in the rural districts round about. The rule has been corroborated for the greater part of the country, since Livi finds that even in the thirty-two darkest provinces, where towns tending toward the mean for the country should contain more blondes than the suburban districts, twenty-one of the capital cities show the reverse relation, while only nine conform to statistical probability. For Switzerland the evidence is conflicting. Applying the rule to the cities of the British Isles, Dr. Beddoe finds it to hold good especially in the color of the hair. Ammon in his detailed researches discovers a tendency toward brunetteness in the cities of Baden. So uniform is the testimony that those who, like Lapouge, have ascribed the long headedness of city populations to a predominance of the Teutonic racial type now acknowledge this tendency toward brunetteness, in spite, in this case, of ethnic probabilities to the contrary. The relative frequency, in fact, of long headedness and coincidently of brunette characteristics induced Lapouge to designate this combination the "foreordained urban type." In conclusion, let us add, not as additional testimony, for the data are too defective, that among five hundred American students at the Institute of Technology in Boston, roughly classified, there were nine per cent of pure brunette type among those of country birth and training, while among those of urban birth and parentage the percentage of such brunette type rose as high as fifteen. The arbitrary limit of twenty thousand inhabitants was here adopted as distinguishing city from suburban populations. Dark hair was noticeably more frequent in the group drawn from the larger towns.

It is not improbable that there is in brunetteness, in the dark hair and eye, some indication of vital superiority. If this were so, it would serve as a partial explanation for the social phenomena

which we have been at so much pains to describe. If in the same community there were a slight vital advantage in brunetness, we should expect to find that type slowly aggregating in the cities; for it requires energy and courage, physical as well as mental, not only to break the ties of home and migrate, but also to maintain one's self afterward under the stress of urban life. Selection thus would be doubly operative. It would determine the character both of the urban immigrants and, to coin a phrase, of the urban *persistents* as well. The idea is worth developing a bit.

Eminent authority stands sponsor for the theorem that pigmentation in the lower animals is an important factor in the great struggle for survival. One proof of this is that albinos in all species are apt to be defective in keenness of sense, thereby being placed at a great disadvantage in the competition for existence with their fellows. Pigmentation, especially in the organs of sense, seems to be essential to their full development. As a result, with the coincident disadvantage due to their conspicuous color, such albinos are ruthlessly weeded out by the processes of natural selection; their nonexistence in a state of nature is noticeable. Darwin and others cite numerous examples of the defective senses of such nonpigmented animals. Thus, in Virginia, the white pigs of the colonists perished miserably by partaking of certain poisonous roots which the dark-colored hogs avoided by reason of keener sense discrimination. In Italy, the same exemption of black sheep from accidental poisoning, to which their white companions were subject, has been noted. Animals so far removed from one another as the horse and the rhinoceros are said to suffer from a defective sense of smell when they are of the albino type. It is a fact of common observation that white cats with blue eyes are quite often deaf. Other examples might be cited of similar import. They all tend to justify Alfred Russell Wallace's conclusion that pigmentation, if not absolutely necessary, at least conduces to acuteness of sense; and that where abundantly present it is often an index of vitality. This eminent naturalist even ventures to connect the aggressiveness of the male sex among the lower animals with its brilliancy of coloring.

Applying these considerations to man, evidence is not entirely wanting to support De Candolle's thesis that "pigmentation is an index of force." Disease often produces a change in the direction of blondness, as Dr. Beddoe has observed; asserting, as he does, that this trait in general is due to a defect of secretion. The case of the negro, cited by Ogle, whose depigmentation was accompanied by a loss of the sense of smell, is a pertinent one. The phenomenon of light-haired childhood and of gray-haired senility points to the same conclusion. A million soldiers observed during our Civil War afforded data for Baxter's assertion that the brunette type, on the whole, opposed a greater resistance to disease, and offered more hope of recovery from injuries in the field. Darwin long ago suggested a relation of pigmentation to the similar resistant power of the dark races in the tropics, although he had to deal with much conflicting evidence. Dr. Beddoe finds in Bristol that the dark-haired children are more tenacious of life, and asserts a distinct superiority of the brunette type in the severe competitions induced by urban life. Havelock Ellis marshals some interesting testimony to the end that the apparently greater pigmentation in woman is correlated with its greater resistant power in the matter of disease. More recently Pfitzner has investigated the same subject, although it is not certain, as we have already observed, that the greater brunetness of his Alsatian women is a phenomenon of race rather than of sex. It is not for us to settle the matter here and now. The solution belongs to the physiologist. As statisticians it behooves us to note facts, leaving choice of explanations to others more competent to judge. It must be said in conclusion, however, that present tendencies certainly point in the direction of some relation between pigmentation and general physiological and mental vigor. If this be established, it will go far to explain some of these curious differences between country and city which we have noted.

From the preceding formidable array of testimony, it appears that the tendency of urban populations is certainly not toward the pure blond, long-headed, and tall Teutonic type. The phenomenon of urban selection is something more complex than

a mere migration of a single racial element in the population toward the cities. The physical characteristics of townsmen are too contradictory for ethnic explanations alone. A process of physiological and social rather than of ethnic selection seems to be at work in addition. To be sure, the tendencies are slight; we are not even certain of their universal existence at all. We are merely watching for their verification or disproof. There is, however, nothing improbable in the phenomena we have noted. Naturalists have always turned to the environment for the final solution of many of the great problems of nature. In this case we have to do with one of the most sudden and radical changes of environment known to man. Every condition of city life, mental as well as physical, is at the polar extreme from those which prevail in the country. To deny that great modifications in human structure and functions may be effected by a change from one to the other is to gainsay all the facts of natural history.

XXX

DEGENERATION¹

ETIOLOGY

We have recognized the effect of diseases in these *fin-de-siècle* literary and artistic tendencies and fashions as well as in the susceptibility of the public with regard to them, and we have succeeded in maintaining that these diseases are degeneracy and hysteria. We have now to inquire how these maladies of the day have originated, and why they appear with such extraordinary frequency at the present time.

Morel, the great investigator of degeneracy, traces this chiefly to poisoning. A race which is regularly addicted, even without excess, to narcotics and stimulants in any form (such as fermented alcoholic drinks, tobacco, opium, hasheesh, arsenic), which partakes of tainted foods (bread made with bad corn), which absorbs organic poisons (marsh fever, syphilis, tuberculosis, goiter), begets degenerate descendants, who, if they remain exposed to the same influences, rapidly descend to the lowest degrees of degeneracy, to idiocy, to dwarfishness, etc. That the poisoning of civilized peoples continues and increases at a very rapid rate is widely attested by statistics. The consumption of tobacco has risen in France from 0.8 kilogram per head in 1841 to 1.9 kilograms in 1890. The corresponding figures for England are 13 and 26 ounces; for Germany, 0.8 and 1.5 kilograms. The consumption of alcohol during the same period has risen in Germany (1844) from 5.45 quarts to (1867) 6.86 quarts; in England from 2.01 liters to 2.64 liters; in France from 1.33 liters to 4 liters. The increase in the consumption of opium and hasheesh is still greater, but we need not concern ourselves about that,

¹ From *Degeneration*, by Max Nordau, Book I, chap. iv; Book V, chap. i, pp. 540-545 (copyright, 1895, by D. Appleton & Co., New York).

since the chief sufferers from them are Eastern peoples, who play no part in the intellectual development of the white races. To these noxious influences, however, one more may be added, which Morel has not known, or has not taken into consideration, — residence in large towns. The inhabitant of a large town, even the richest, who is surrounded by the greatest luxury, is continually exposed to unfavorable influences which diminish his vital powers far more than what is inevitable. He breathes an atmosphere charged with organic detritus; he eats stale, contaminated, adulterated food; he feels himself in a state of constant nervous excitement, and one can compare him without exaggeration to the inhabitant of a marshy district. The effect of a large town on the human organism offers the closest analogy to that of the Maremma, and its population falls victim to the same fatality of degeneracy and destruction as the victims of malaria. The death rate in a large town is more than a quarter greater than the average for the entire population; it is double that of the open country, though in reality it ought to be less, since in a large town the most vigorous ages predominate, during which the mortality is lower than in infancy and old age. And the children of large towns who are not carried off at an early age suffer from the peculiar arrested development which Morel has ascertained in the population of fever districts. They develop more or less normally until fourteen or fifteen years of age, are up to that time alert, sometimes brilliantly endowed, and give the highest promise; then suddenly there is a standstill, the mind loses its facility of comprehension, and the boy who, only yesterday, was a model scholar, becomes an obtuse, clumsy dunce, who can only be steered with the greatest difficulty through his examinations. With these mental changes bodily modifications go hand in hand. The growth of the long bones is extremely slow, or ceases entirely, the legs remain short, the pelvis retains a feminine form, certain other organs cease to develop, and the entire being presents a strange and repulsive mixture of incompleteness and decay.

Now we know how, in the last generation, the number of the inhabitants of great towns increased to an extraordinary degree.

At the present time an incomparably larger portion of the whole population is subjected to the destructive influences of large towns than was the case fifty years ago ; hence the number of victims is proportionately more striking, and continually becomes more remarkable. Parallel with the growth of large towns is the increase in the number of degenerates of all kinds, — criminals, lunatics, and the “higher degenerates” of Magnan; and it is natural that these last should play an ever more prominent part in endeavoring to introduce an ever greater element of insanity into art and literature.

The enormous increase of hysteria in our days is partly due to the same causes as degeneracy, besides which there is one cause much more general still than the growth of large towns, — a cause which perhaps of itself would not be sufficient to bring about degeneracy, but which is unquestionably quite enough to produce hysteria and neurasthenia. This cause is the fatigue of the present generation. That hysteria is in reality a consequence of fatigue Féré has conclusively demonstrated by convincing experiments. In a communication to the Biological Society of Paris this distinguished investigator says : “I have recently observed a certain number of facts which have made apparent the analogy existing between fatigue and the chronic condition of the hysterical. One knows that among the hysterical (involuntary!) symmetry of movements frequently shows itself in a very characteristic manner. I have proved that in normal subjects this same symmetry of movements is met with under the influence of fatigue. A phenomenon which shows itself in a very marked way in serious hysteria is that peculiar excitability which demonstrates that the energy of the voluntary movements, through peripheral stimulations or mental presentations, suffers rapid and transitory modifications coexisting with parallel modifications of sensibility, and of the functions of nutrition. This excitability can be equally manifested during fatigue. . . . Fatigue constitutes a true temporary experimental hysteria. It establishes a transition between the states which we call normal and the various states which we designate hysteria. One can change a normal into an hysterical individual by tiring him. . . . All these

causes (which produce hysteria) can, as far as the pathogenic part they play is concerned, be traced to one simple physiological process, — to fatigue, to depression of vitality."

Now, to this cause, — fatigue, — which, according to Féré, changes healthy men into hysterical, the whole of civilized humanity has been exposed for half a century. All its conditions of life have, in this period of time, experienced a revolution unexampled in the history of the world. Humanity can point to no century in which the inventions which penetrate so deeply, so tyrannically, into the life of every individual are crowded so thick as in ours. The discovery of America, the Reformation, stirred men's minds powerfully, no doubt, and certainly also destroyed the equilibrium of thousands of brains which lacked staying power. But they did not change the material life of man. He got up and lay down, ate and drank, dressed, amused himself, passed his days and years as he had been always wont to do. In our times, on the contrary, steam and electricity have turned the customs of life of every member of the civilized nations upside down, even of the most obtuse and narrow-minded citizen, who is completely inaccessible to the impelling thoughts of the times.

In an exceptionally remarkable lecture by Professor A. W. von Hofmann, in 1890, before the Congress of German Natural Science held in Bremen, he gave, in concluding, a short description of the life of an inhabitant of a town in the year 1822. He shows us a student of science, who at that date is arriving with the coach from Bremen to Leipsic. The journey has lasted four days and four nights, and the traveler is naturally stiff and bruised. His friends receive him, and he wishes to refresh himself a little. But there is yet no Munich beer in Leipsic. After a short interview with his comrades, he goes in search of his inn. This is no easy task, for in the streets an Egyptian darkness reigns, broken only at long distances by the smoky flame of an oil lamp. He at last finds his quarters and wishes for a light. As matches do not yet exist, he is reduced to bruising the tips of his fingers with flint and steel, till he succeeds at last in lighting a tallow candle. He expects a letter, but it has not come, and

he cannot now receive it till after some days, for the post only runs twice a week between Frankfort and Leipsic.

But it is unnecessary to go back to the year 1822, chosen by Professor Hofmann. Let us stop for purposes of comparison at the year 1840. This year has not been arbitrarily selected. It is about the date when that generation was born which has witnessed the irruption of new discoveries in every relation of life, and thus personally experienced those transformations which are the consequences. This generation reigns and governs to-day; it sets the tone everywhere, and its sons and daughters are the youth of Europe and America, in whom the new æsthetic tendencies gain their fanatical partisans. Let us now compare how things went on in the civilized world in 1840 and half a century later.

In 1840 there were in Europe 3000 kilometers of railway; in 1891 there were 218,000 kilometers. The number of travellers in 1840 in Germany, France, and England amounted to 2,500,000; in 1891 it was 614,000,000. In Germany every inhabitant received, in 1840, 85 letters; in 1888, 200 letters. In 1840 the post distributed in France 94,000,000 letters; in England, 277,000,000; in 1889, 595,000,000 and 1,299,000,000 respectively. The collective postal intercourse between all countries, without including the internal postage of each separate country, amounted, in 1840, to 92,000,000; in 1889, to 2,759,000,000. In Germany, in 1840, 305 newspapers were published; in 1891, 6800; in France, 776 and 5182; in England in 1846, 551 and 2255. The German book trade produced, in 1840, 1100 new works; in 1891, 18,700. The exports and imports of the world had, in 1840, a value of 28, in 1889 of 74 milliards. The ships which, in 1840, entered all the ports of Great Britain contained 9,500,000 tons; in 1890, 74,500,000 tons. The whole British merchant navy measures, in 1840, 3,200,000 tons; in 1890, 9,688,000 tons.

Let us now consider how these formidable figures arise. The 18,000 new publications, the 6800 newspapers in Germany, desire to be read, although many of them desire in vain; the 2,759,000,000 letters must be written; the larger commercial transactions, the numerous journeys, the increased marine intercourse, imply a correspondingly greater activity in individuals.

The humblest village inhabitant has to-day a wider geographical horizon, more numerous and complex intellectual interests, than the prime minister of a petty or even a second-rate state a century ago. If he do but read his paper, let it be the most innocent provincial rag, he takes part certainly not by active interference and influence but by a continuous and receptive curiosity in the thousand events which take place in all parts of the globe, and he interests himself simultaneously in the issue of a revolution in Chili, in a bush war in East Africa, a massacre in north China, a famine in Russia, a street row in Spain, and an international exhibition in North America. A cook receives and sends more letters than a university professor did formerly, and a petty tradesman travels more and sees more countries and people than did the reigning prince of other times.

All these activities, however, even the simplest, involve an effort of the nervous system and a wearing of tissue. Every line we read or write, every human face we see, every conversation we carry on, every scene we perceive through the window of the flying express, sets in activity our sensory nerves and our brain centers. Even the little shocks of railway traveling, not perceived by consciousness, the perpetual noises, and the various sights in the streets of a large town, our suspense pending the sequel of progressing events, the constant expectation of the newspaper, of the postman, of visitors, cost our brains wear and tear. In the last fifty years the population of Europe has not doubled, whereas the sum of its labors has increased tenfold, in part even fiftyfold. Every civilized man furnishes at the present time from five to twenty-five times as much work as was demanded of him half a century ago.

This enormous increase in organic expenditure has not, and cannot have, a corresponding increase of supply. Europeans now eat a little more and a little better than they did fifty years ago, but by no means in proportion to the increase of effort which to-day is required of them. And even if they had the choicest food in the greatest abundance, it would do nothing towards helping them, for they would be incapable of digesting it. Our stomachs cannot keep pace with the brain and the nervous

system. The latter demand very much more than the former are able to perform. And so there follows what always happens if great expenses are met by small incomes ; first the savings are consumed, then comes bankruptcy.

Its own new discoveries and progress have taken civilized humanity by surprise. It has no time to adapt itself to its changed conditions of life. We know that our organs acquire by exercise an ever greater functional capacity, that they develop by their own activity, and can respond to nearly every demand made upon them ; but only under one condition, — that this occurs gradually, that time be allowed them. If they are obliged to fulfill, without transition, a multiple of their usual task, they soon give out entirely. No time was left to our fathers. Between one day and the next, as it were, without preparation, with murderous suddenness, they were obliged to change the comfortable creeping gait of their former existence for the stormy stride of modern life, and their heart and lungs could not bear it. The strongest could keep up, no doubt, and even now, at the most rapid pace, no longer lose their breath, but the less vigorous soon fell out right and left, and fill to-day the ditches on the road of progress.

To speak without metaphor, statistics indicate in what measure the sum of work of civilized humanity has increased during the half century. It had not quite grown to this increased effort. It grew fatigued and exhausted, and this fatigue and exhaustion showed themselves in the first generation, under the form of acquired hysteria ; in the second, as hereditary hysteria.

The new æsthetic schools and their success are a form of this general hysteria, but they are far from being the only one. The malady of the period shows itself in yet many other phenomena which can be measured and counted, and thus are susceptible of being scientifically established. And these positive and unambiguous symptoms of exhaustion are well adapted to enlighten the ignorant, who might believe at first sight that the specialist acts arbitrarily in tracing back fashionable tendencies in art and literature to states of fatigue in civilized humanity.

It has become a commonplace to speak of the constant increase of crime, madness, and suicide. In 1841, in Prussia, out

of 100,000 persons of criminally responsible age there were 714 convictions; in 1888, 1102 (from a letter communicated by the Prussian bureau of statistics). In 1865, in every 10,000 Europeans there were 63 suicides; in 1883, 109; and since that time the number has increased considerably. In the last twenty years a number of new nervous diseases have been discovered and named. Let it not be believed that they always existed, and were merely overlooked. If they had been met with anywhere they would have been detected, for even if the theories which prevailed in medicine at various periods were erroneous, there have always been perspicacious and attentive physicians who knew how to observe. If, then, the new nervous diseases were not noticed, it is because they did not formerly appear. And they are exclusively a consequence of the present conditions of civilized life. Many affections of the nervous system already bear a name which implies that they are a direct consequence of certain influences of modern civilization. The terms "railway spine" and "railway brain," which the English and American pathologists have given to certain states of these organs, show that they recognize them as due partly to the effects of railway accidents, partly to the constant vibrations undergone in railway traveling. Again, the great increase in the consumption of narcotics and stimulants, which has been shown in the figures above, has its origin unquestionably in the exhausted systems with which the age abounds. There is here a disastrous, vicious circle of reciprocal effects. The drinker (and apparently the smoker also) begets enfeebled children, hereditarily fatigued or degenerated, and these drink and smoke in their turn, because they are fatigued. These crave for a stimulus, for a momentary, artificial invigoration, or an alleviation of their painful excitability, and then, when they recognize that this increases, in the long run, their exhaustion as well as their excitability, they cannot, through weakness of will, resist those habits.

Many observers assert that the present generation ages much more rapidly than the preceding one. Sir James Crichton-Browne points out this effect of modern circumstances on contemporaries in his speech at the opening of the winter term, 1891, before the

medical faculty of the Victoria University. From 1859 to 1863 there died in England, of heart disease, 92,181 persons; from 1884 to 1888, 224,102. Nervous complaints carried off from 1864 to 1868, 196,000 persons; from 1884 to 1888, 260,558. The difference of figures would have been still more striking if Sir James had chosen a more remote period for comparison with the present, for in 1865 the high pressure under which the English worked was already nearly as great as in 1885. The dead carried off by heart and nerve diseases are the victims of civilization. The heart and nervous system first break down under the overstrain. Sir James, in his speech, says further on: "Men and women grow old before their time. Old age encroaches upon the period of vigorous manhood. . . . Deaths due exclusively to old age are found reported now between the ages of forty-five and fifty-five. . . ." Mr. Critchet, an eminent oculist, says: "My own experience, which extends now over a quarter of a century, leads me to believe that men and women, in the present day, seek the aid of spectacles at a less advanced period of life than their ancestors. . . . Previously men had recourse to spectacles at the age of fifty. The average age is now forty-five-years." Dentists assert that teeth decay and fall out at an earlier age than formerly. Dr. Lieving attests the same respecting the hair, and assures us that precocious baldness is to be specially observed "among persons of nervous temperaments and active mind, but of weak general health." Every one who looks round the circle of his friends and acquaintances will remark that the hair begins to turn gray much sooner than in former days. Most men and women show their first white hairs at the beginning of the thirties, many of them at a very much younger age. Formerly white hair was the accompaniment of the fiftieth year.

All the symptoms enumerated are the consequences of states of fatigue and exhaustion, and these, again, are the effect of contemporary civilization, of the vertigo and whirl of our frenzied life, the vastly increased number of sense impressions and organic reactions, and therefore of perceptions, judgments, and motor impulses, which at present are forced into a given unity of time.

To this general cause of contemporary pathological phenomena, one may be added special to France. By the frightful loss of blood which the French people suffered during the twenty years of the Napoleonic wars, by the violent moral upheavals to which they were subjected in the great Revolution and during the imperial epoch, they found themselves exceedingly ill prepared for the impact of the great discoveries of the century, and sustained by these a more violent shock than other nations more robust and more capable of resistance. Upon this nation, nervously strained and predestined to morbid derangement, there broke the awful catastrophe of 1870. It had, with a self-satisfaction which almost attained to megalomania, believed itself the first nation in the world; it now saw itself suddenly humiliated and crushed. All its convictions abruptly crumbled to pieces. Every single Frenchman suffered reverses of fortune, lost some members of his family, and felt himself personally robbed of his dearest conceptions, nay, even of his honor. The whole people fell into the condition of a man suddenly visited by a crushing blow of destiny, in his fortune, his position, his family, his reputation, even in his self-respect. Thousands lost their reason. In Paris a veritable epidemic of mental diseases was observed, for which a special name was found,—*la folie obsidionale*, "siege madness." And even those who did not at once succumb to mental derangement suffered lasting injury to their nervous system. This explains why hysteria and neurasthenia are much more frequent in France, and appear under such a greater variety of forms, and why they can be studied far more closely in this country than anywhere else. But it explains, too, that it is precisely in France that the craziest fashions in art and literature would necessarily arise, and that it is precisely there that the morbid exhaustion of which we have spoken became for the first time sufficiently distinct to consciousness to allow a special name to be coined for it, viz. the designation of *fin de siècle*.

The proposition which I set myself to prove may now be taken as demonstrated. In the civilized world there obviously prevails a twilight mood which finds expression, amongst other ways, in all sorts of odd æsthetic fashions. All these new tendencies,

realism or naturalism, "decadentism," neo-mysticism and their subvarieties, are manifestations of degeneration and hysteria, and identical with the mental stigmata which the observations of clinicists have unquestionably established as belonging to these. But both degeneration and hysteria are the consequences of the excessive organic wear and tear suffered by the nations through the immense demands on their activity, and through the rank growth of large towns.

Led by this firmly linked chain of causes and effects, every one capable of logical thought will recognize that he commits a serious error if, in the æsthetic schools which have sprung up in the last few years, he sees the heralds of a new era. They do not direct us to the future, but point backwards to times past. Their word is no ecstatic prophecy, but the senseless stammering and babbling of deranged minds, and what the ignorant hold to be the outbursts of gushing, youthful vigor and turbulent constructive impulses are really nothing but the convulsions and spasms of exhaustion.

We should not allow ourselves to be deceived by certain catchwords, frequently uttered in the works of these professed innovators. They talk of socialism, of emancipation of the mind, etc., and thereby create the outward show of being deeply imbued with the thoughts and struggles of the times. But this is empty sham. The catchwords in vogue are scattered through the works without internal sequence, and the struggles of the times are merely painted on the outside. It is a phenomenon observed in every kind of mania, that it receives its special coloring from the degree of culture of the invalid, and from the views prevailing at the times in which he lived. The Catholic who is a prey to megalomania fancies he is the pope; the Jew, that he is the Messiah; the German, that he is the Emperor or a field marshal; the Frenchman, that he is the President of the Republic. In the persecution mania, the invalid of former days complained of the wickedness and knavery of magicians and witches; to-day he grumbles because his imaginary enemies send electric streams through his nerves, and torment him with magnetism. The degenerates of to-day chatter of socialism and Darwinism, because

these words and, in the best case, the ideas connected with these are in current use. These so-called socialists and freethinking works of the degenerate as little advance the development of society towards more equitable economic forms, and more rational views of the relations among phenomena, as the complaints and descriptions of an individual suffering from persecution mania, and who hold electricity responsible for his disagreeable sensations, advance the knowledge of this force of nature. Those obscure or superficially verbose works which pretend to offer solutions for the serious questions of our times, or, at least, to prepare the way thereto, are even impediments and causes of delay, because they bewilder weak or unschooled brains, suggest to them erroneous views, and make them either more inaccessible to rational information or altogether closed to it.

The reader is now placed at those points of view whence he can see the new æsthetic tendencies in their true light and their real shape. It will be the task of the following books to demonstrate the pathological character of each one of these tendencies, and to inquire what particular species of degenerate delirium or hysterical psychological process they are related to or identical with.

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PROGNOSIS

As long as the vital powers of an individual, as of a race, are not wholly consumed, the organism makes efforts actively or passively to adapt itself, by seeking to modify injurious conditions, or by adjusting itself in some way so that conditions impossible to modify should be as little noxious as possible. Degenerates, hysterics, and neurasthenics are not capable of adaptation. Therefore they are fated to disappear. That which inexorably destroys them is that they do not know how to come to terms with reality. They are lost, whether they are alone in the world, or whether there are people with them who are still sane, or more sane than they, or at least curable.

They are lost if they are alone; for antisocial, inattentive, without judgment or prevision, they are capable of no useful

individual effort, and still less of a common labor which demands obedience, discipline, and the regular performance of duty. They fritter away their life in solitary, unprofitable, æsthetic debauch, and all that their organs, which are in full regression, are still good for is enervating enjoyment. Like bats in old towers, they are niched in the proud monument of civilization, which they have found ready-made, but they themselves can construct nothing more, nor prevent any deterioration. They live, like parasites, on labor which past generations have accumulated for them; and when the heritage is once consumed, they are condemned to die of hunger.

But they are still more surely and rapidly lost if, instead of being alone in the world, healthy beings yet live at their side. For in that case they have to fight in the struggle for existence, and there is no leisure for them to perish in a slow decay by their own incapacity for work. The normal man, with his clear mind, logical thought, sound judgment, and strong will, sees, where the degenerate only gropes; he plans and acts, where the latter dozes and dreams; he drives him without effort from all the places where the lifesprings of nature bubble up, and, in possession of all the good things of this earth, he leaves to the impotent degenerate at most the shelter of the hospital, lunatic asylum, and prison, in contemptuous pity. Let us imagine the driveling Zoroaster of Nietzsche, with his cardboard lions, eagles, and serpents from a toyshop, or the noctambulist Des Esseintes of the decadents, sniffing and licking his lips, or Ibsen's "solitary powerful" Stockmann, and his Rosmer lusting for suicide, — let us imagine these beings in competition with men who rise early, and are not weary before sunset, who have clear heads, solid stomachs, and hard muscles: the comparison will provoke our laughter.

Degenerates must succumb, therefore. They can neither adapt themselves to the conditions of nature and civilization, nor maintain themselves in the struggle for existence against the healthy. But the latter — and the vast masses of the people still include unnumbered millions of them — will rapidly and easily adapt themselves to the conditions which new inventions have created

in humanity. Those who, by marked deficiency of organization, are unable to do so, among the generation taken unawares by these inventions, fall out of the ranks; they become hysterical and neurasthenical, engender degenerates, and in these end their race; but the more vigorous, although they at first also have become bewildered and fatigued, recover themselves little by little, their descendants accustom themselves to the rapid progress which humanity must make, and soon their slow respiration and their quieter pulsations of the heart will prove that it no longer costs them any effort to keep pace and keep up with the others. The end of the twentieth century, therefore, will probably see a generation to whom it will not be injurious to read a dozen square yards of newspapers daily, to be constantly called to the telephone, to be thinking simultaneously of the five continents of the world, to live half their time in a railway carriage or in a flying machine, and to satisfy the demands of a circle of ten thousand acquaintances, associates, and friends. It will know how to find its ease in the midst of a city inhabited by millions, and will be able, with nerves of gigantic vigor, to respond without haste or agitation to the almost innumerable claims of existence.

If, however, the new civilization should decidedly outstrip the powers of humanity, if even the most robust of the species should not in the long run grow up to it, then ulterior generations will settle with it in another way. They will simply give it up. For humanity has a sure means of defense against innovations which impose a destructive effort on its nervous system, namely, "misoneism," that instinctive, invincible aversion to progress and its difficulties that Lombroso has studied so much, and to which he has given this name. Misoneism protects man from changes of which the suddenness or the extent would be baneful to him. But it does not only appear as resistance to the acceptance of the new; it has another aspect, to wit, the abandonment and gradual elimination of inventions imposing claims too hard on man. We see savage races who die out when the power of the white man makes it impossible for them to shut out civilization; but we see also some who hasten with joy to tear off and throw

away the stiff collar imposed by civilization, as soon as constraint is removed. I need only recall the anecdote, related in detail by Darwin, of the Fuegian Jemmy Button, who, taken as a child to England and brought up in that country, returned to his own land in the patent-leather shoes and gloves and what not of fashionable attire, but who, when scarcely landed, threw off the spell of all this foreign lumber for which he was not ripe, and became again a savage among savages. During the period of the great migrations, the barbarians constructed blockhouses in the shadow of the marble palaces of the Romans they had conquered, and preserved of Roman institutions, inventions, arts, and sciences only those which were easy and pleasant to bear. Humanity has, to-day as much as ever, the tendency to reject all that it cannot digest. If future generations come to find that the march of progress is too rapid for them, they will after a time composedly give it up. They will saunter along at their own pace or stop as they choose. They will suppress the distribution of letters, allow railways to disappear, banish telephones from dwelling houses, preserving them only, perhaps, for the service of the state, will prefer weekly papers to daily journals, will quit cities to return to the country, will slacken the changes of fashion, will simplify the occupations of the day and year, and will grant the nerves some rest again. Thus adaptation will be effected in any case, either by the increase of nervous power, or by the renunciation of acquisitions which exact too much from the nervous system.

As to the future of art and literature, with which these inquiries are chiefly concerned, that can be predicted with tolerable clearness. I resist the temptation of looking into too remote a future. Otherwise I should perhaps prove, or at least show as very probable, that in the mental life of centuries far ahead of us art and poetry will occupy but a very insignificant place. Psychology teaches us that the course of development is from instinct to knowledge, from emotion to judgment, from rambling to regulated association of ideas. Attention replaces fugitive ideation; will, guided by reason, replaces caprice. Observation, then, triumphs ever more and more over imagination and artistic

symbolism, — i.e. the introduction of erroneous personal interpretations of the universe is more and more driven back by an understanding of the laws of nature. On the other hand, the march followed hitherto by civilization gives us an idea of the fate which may be reserved for art and poetry in a very distant future. That which originally was the most important occupation of men of full mental development, of the maturest, best, and wisest members of society, becomes little by little a subordinate pastime, and finally a child's amusement. Dancing was formerly an extremely important affair. It was performed on certain grand occasions, as a state function of the first order, with solemn ceremonies, after sacrifices and invocations to the gods, by the leading warriors of the tribe. To-day it is no more than a fleeting pastime for women and youths, and later on its last atavistic survival will be the dancing of children. The fable and the fairy tale were once the highest productions of the human mind. In them the most hidden wisdom of the tribe and its most precious traditions were expressed. To-day they represent a species of literature only cultivated for the nursery. The verse which by rhythm, figurative expression, and rhyme treibly betrays its origin in the stimulations of rhythmically functioning subordinate organs, in association of ideas working according to external similitudes, and in that working according to consonance, was originally the only form of literature. To-day it is only employed for purely emotional portrayal ; for all other purposes it has been conquered by prose, and, indeed, has almost passed into the condition of an atavistic language. Under our very eyes the novel is being increasingly degraded, serious and highly cultivated men scarcely deeming it worthy of attention, and it appeals more and more exclusively to the young and to women. From all these examples, it is fair to conclude that after some centuries art and poetry will have become pure atavisms, and will no longer be cultivated except by the most emotional portion of humanity, — by women, by the young, perhaps even by children.

But, as I have said, I merely venture on these passing hints as to their yet remote destinies, and will confine myself to the immediate future, which is far more certain.

In all countries æsthetic theorists and critics repeat the phrase that the forms hitherto employed by art are henceforth effete and useless, and that it is preparing something perfectly new, absolutely different from all that is yet known. Richard Wagner first spoke of the "art work of the future," and hundreds of incapable imitators lisp the term after him. Some among them go so far as to try to impose upon themselves and the world that some inexpressive banality, or some pretentious inanity which they have patched up, is this art work of the future. But all these talks about sunrise, the dawn, new land, etc., are only the twaddle of degenerates incapable of thought. The idea that to-morrow morning at half-past seven o'clock a monstrous, unsuspected event will suddenly take place; that on Thursday next a complete revolution will be accomplished at a single blow, that a revelation, a redemption, the advent of a new age, is imminent, — this is frequently observed among the insane; it is a mystic delirium. Reality knows not these sudden changes. Even the great Revolution in France, although it was directly the work of a few ill-regulated minds like Marat and Robespierre, did not penetrate far into the depths, as has been shown by H. Taine and proved by the ulterior progress of history; it changed the outer more than the inner relations of the French social organism. All development is carried on slowly; the day after is the continuation of the day before; every new phenomenon is the outcome of a more ancient one, and preserves a family resemblance to it. "One would say," observes Renan with quiet irony, "that the young have neither read the history of philosophy nor Ecclesiastes, 'The thing that hath been, it is that which shall be.'" The art and poetry of to-morrow, in all essential points, will be the art and poetry of to-day and yesterday, and the spasmodic seeking for new forms is nothing more than hysterical vanity, the freaks of strolling players and charlatanism. Its sole result has hitherto been childish declamation, with colored lights and changing perfumes as accompaniments, and atavistic games of shadows and pantomimes, nor will it produce anything more serious in the future.

New forms! Are not the ancient forms flexible and ductile enough to lend expression to every sentiment and every thought?

Has a true poet ever found any difficulty in pouring into known and standard forms that which surged within him and demanded an issue? Has form, for that matter, the dividing, predetermining, and delimitating importance which dreamers and simpletons attribute to it? The forms of lyric poetry extend from the birth-day rhyming of the "popular poet of the occasion," who works to order and publishes his address in the paper, to Schiller's *Lay of the Bell*; dramatic form includes at the same time the *Geschundener Raubritter* ("The Highwayman Fleeced"), acted some time ago at Berlin, and Goethe's *Faust*; the epic form embraces Körtum's *Jobsiade* and Dante's *Divina Commedia*, Heinz Tovote's *Im Liebesrauche* and Thackeray's *Vanity Fair*. And yet there are bleatings for "new forms"? If such there be, they will give no talent to the incapable, and those who have talent know how to create something even within the limits of old forms. The most important thing is the having something to say. Whether it be said under a lyric, dramatic, or epic form is of no essential consequence, and the author will not easily feel the necessity of leaving these forms in order to invent some dazzling novelty in which to clothe his ideas. The history of art and poetry teaches us, moreover, that new forms have not been found for three thousand years. The old ones have been given by the nature of human thought itself. They would only be able to change if the form of our thought itself became changed. There is, of course, evolution, but it only affects externals, not our inmost being. The painter, for example, discovers the picture on the easel after the picture on the wall; sculpture, after the free figure, discovers high relief, and still later low relief, which already intrenches in a way not free from objection on the domain of the painter; the drama renounces its supernatural character, and learns to unfold itself in a more compact and condensed exposition; the epos abandons rhythmic language, and makes use of prose, etc. In these questions of detail evolution will continue to operate, but there will be no modification in the fundamental lines of the different modes of expression for human emotion.

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[In one sense the entire literature of economics and social science might be included in these Additional References. The purpose has been, however, to include only such works as have brought out, in a significant manner, the direct relation of certain economic and social facts to the general progress of society. Even within this narrow field the compiler has selected his references sparingly in order to avoid confusing the reader. — ED.]

D. THE POLITICAL AND LEGAL FACTORS

XXXI

TALK¹

We may rail at "mere talk" as much as we please, but the probability is that the affairs of nations and of men will be more and more regulated by talk. The amount of talk which is now expended on all subjects of human interest — and in "talk" I include contributions to periodical literature — is something of which a previous age has had the smallest conception. Of course it varies infinitely in quality. A very large proportion of it does no good beyond relieving the feelings of the talker. Political philosophers maintain, and with good reason, that one of its greatest uses is keeping down discontent under popular government. It is undoubtedly true that it is an immense relief to a man with a grievance to express his feelings about it in words, even if he knows that his words will have no immediate effect. Self-love is apt to prevent most men from thinking that anything they say with passion or earnestness will utterly and finally fail. But still it is safe to suppose that one half of the talk of the world on subjects of general interest is waste. But the other half certainly tells. We know this from the change in ideas from generation to generation. We see that opinions which at one time everybody held became absurd in the course of half a century, — opinions about religion and morals and manners and government. Nearly every man of my age can recall old opinions of his own, on subjects of general interest, which he once thought highly respectable, and which he is now almost ashamed of having ever held. He does not remember when he changed them, or

¹ From *Problems of Modern Democracy*, by Edward Lawrence Godkin, pp. 221-224 (copyright, 1896, by Charles Scribner's Sons).

why, but somehow they have passed away from him. In communities these changes are often very striking. The transformation, for instance, of the England of Cromwell into the England of Queen Anne, or of the New England of Cotton Mather into the New England of Theodore Parker and Emerson, was very extraordinary, but it would be very difficult to say in detail what brought it about, or when it began. Lecky has some curious observations, in his *History of Rationalism*, on these silent changes in new beliefs apropos of the disappearance of the belief in witchcraft. Nobody could say what had swept it away, but it appeared that in a certain year people were ready to burn old women as witches, and a few years later were ready to laugh at or pity any one who thought old women could be witches. "At one period," says he, "we find every one disposed to believe in witches; at a later period we find this predisposition has silently passed away." The belief in witchcraft may perhaps be considered a somewhat violent illustration, like the change in public opinion about slavery in this country. But there can be no doubt that it is talk — somebody's, anybody's, everybody's talk — by which these changes are wrought, by which each generation comes to feel and think differently from its predecessor. No one ever talks freely about anything without contributing something, let it be ever so little, to the unseen forces which carry the race on to its final destiny. Even if he does not make a positive impression, he counteracts or modifies some other impression, or sets in motion some train of ideas in some one else, which helps to change the face of the world. So I shall, in disregard of the great laudation of silence which filled the earth in the days of Carlyle, say that one of the functions of an educated man is to talk, and, of course, he should try to talk wisely.

XXXII

THE AGE OF DISCUSSION¹

The greatest living contrast is between the old Eastern and customary civilizations and the new Western and changeable civilizations. A year or two ago an inquiry was made of our most intelligent officers in the East, not as to whether the English government were really doing good in the East, but as to whether the natives of India themselves thought we were doing good; to which, in a majority of cases, the officers, who were the best authority, answered thus: "No doubt you are giving the Indians many great benefits: you give them continued peace, free trade, the right to live as they like, subject to the laws; in these points and others they are far better off than they ever were; but still they cannot make you out. What puzzles them is your constant disposition to change, or, as you call it, improvement. Their own life in every detail being regulated by ancient usage, they cannot comprehend a policy which is always bringing something new; they do not a bit believe that the desire to make them comfortable and happy is the root of it; they believe, on the contrary, that you are aiming at something which they do not understand,—that you mean to 'take away their religion'; in a word, that the end and object of all these continual changes is to make Indians not what they are and what they like to be, but something new and different from what they are, and what they would not like to be." In the East, in a word, we are attempting to put new wine into old bottles,—to pour what we can of a civilization whose spirit is progress into the form of a civilization whose spirit is fixity, and whether we shall succeed or not is perhaps the most interesting question in an age abounding almost beyond example in questions of political interest.

¹ From *Physics and Politics*, by Walter Bagehot, pp. 156–204. D. Appleton & Co., New York.

Historical inquiries show that the feeling of the Hindus is the old feeling, and that the feeling of the Englishman is a modern feeling. "Old law rests," as Sir Henry Maine puts it, "not on contract but on status." The life of ancient civilization, so far as legal records go, runs back to a time when every important particular of life was settled by a usage which was social, political, and religious, as we should now say, all in one, — which those who obeyed it could not have been able to analyze, for those distinctions had no place in their mind and language, but which they felt to be a usage of imperishable import, and above all things to be kept unchanged. In former papers I have shown, or at least tried to show, why these customary civilizations were the only ones which suited an early society; why, so to say, they alone could have been first; in what manner they had in their very structure a decisive advantage over all competitors. But now comes the further question: If fixity is an invariable ingredient in early civilizations, how then did any civilization become unfixed? No doubt most civilizations stuck where they first were; no doubt we see now why stagnation is the rule of the world, and why progress is the very rare exception; but we do not learn what it is which has caused progress in these few cases, or the absence of what it is which has denied it in all others.

To this question history gives a very clear and very remarkable answer. It is that the change from the age of status to the age of choice was first made in states where the government was to a great and a growing extent a government by discussion, and where the subjects of that discussion were in some degree abstract, or, as we should say, matters of principle. It was in the small republics of Greece and Italy that the chain of custom was first broken. "Liberty said, Let there be light, and, like a sunrise on the sea, Athens arose," says Shelley, and his historical philosophy is in this case far more correct than is usual with him. A free state — a state with liberty — means a state, call it republic or call it monarchy, in which the sovereign power is divided among many persons, and in which there is the freest possible discussion among those persons. Of these the Greek

republics were the first in history, if not in time, and Athens was the greatest of those republics.

After the event it is easy to see why the teaching of history should be this and nothing else. It is easy to see why the common discussion of common actions or common interests should become the root of change and progress. In early society, originality in life was forbidden and repressed by the fixed rule of life. It may not have been quite so much so in ancient Greece as in some other parts of the world. But it was very much so even there. As a recent writer has well said, "Law then presented itself to men's minds as something venerable and unchangeable, as old as the city; it had been delivered by the founder himself, when he laid the walls of the city, and kindled its sacred fire." An ordinary man who wished to strike out a new path, to begin a new and important practice by himself, would have been peremptorily required to abandon his novelties on pain of death; he was deviating, he would be told, from the ordinances imposed by the gods on his nation, and he must not do so to please himself. On the contrary, others were deeply interested in his actions. If he disobeyed, the gods might inflict grievous harm on all the people as well as him. Each partner in the most ancient kind of partnerships was supposed to have the power of attracting the wrath of the divinities on the entire firm, upon the other partners quite as much as upon himself. The quaking bystanders in a superstitious age would soon have slain an isolated bold man in the beginning of his innovations. What Macaulay so relied on as the incessant source of progress — the desire of man to better his condition — was not then permitted to work; man was required to live as his ancestors had lived.

Still further away from those times were the "free thought" and the "advancing sciences" of which we now hear so much. The first and most natural subject upon which human thought concerns itself is religion; the first wish of the half-emancipated thinker is to use his reason on the great problems of human destiny, — to find out whence he came and whither he goes, to form for himself the most reasonable idea of God which he can form. But, as Mr. Grote happily said, "This is usually what ancient times

would not let a man do. His *gens* or his *φρατρία* required him to believe as they believed." Toleration is of all ideas the most modern, because the notion that the bad religion of A cannot impair, here or hereafter, the welfare of B, is, strange to say, a modern idea. And the help of "science," at that stage of thought, is still more nugatory. Physical science, as we conceive it — that is, the systematic investigation of external nature in detail — did not then exist. A few isolated observations on surface things — a half-correct calendar, secrets mainly of priestly invention, and in priestly custody — were all that was then imagined; the idea of using a settled study of nature as a basis for the discovery of new instruments and new things did not then exist. It is indeed a modern idea, and is peculiar to a few European countries even yet. In the most intellectual city of the ancient world, in its most intellectual age, Socrates, its most intellectual inhabitant, discouraged the study of physics because they engendered uncertainty, and did not augment human happiness. The kind of knowledge which is most connected with human progress now was that least connected with it then.

But a government by discussion, if it can be borne, at once breaks down the yoke of fixed custom. The idea of the two is inconsistent. As far as it goes, the mere putting up of a subject to discussion, with the object of being guided by that discussion, is a clear admission that that subject is in no degree settled by established rule, and that men are free to choose in it. It is an admission, too, that there is no sacred authority, — no one transcendent and divinely appointed man whom in that matter the community is bound to obey. And if a single subject or group of subjects be once admitted to discussion, ere long the habit of discussion comes to be established, the sacred charm of use and wont to be dissolved. "Democracy," it has been said in modern times, "is like the grave; it takes, but it does not give." The same is true of "discussion." Once effectually submit a subject to that ordeal, and you can never withdraw it again; you can never again clothe it with mystery, or fence it by consecration; it remains forever open to free choice, and exposed to profane deliberation.

The only subjects which can be first submitted, or which till a very late age of civilization can be submitted to discussion in the community, are the questions involving the visible and pressing interests of the community; they are political questions of high and urgent import. If a nation has in any considerable degree gained the habit, and exhibited the capacity, to discuss these questions with freedom, and to decide them with discretion, to argue much on politics and not to argue ruinously, an enormous advance in other kinds of civilization may confidently be predicted for it. And the reason is a plain deduction from the principles which we have found to guide early civilization. The first prehistoric men were passionate savages, with the greatest difficulty coerced into order and compressed into a state. For ages were spent in beginning that order and founding that state; the only sufficient and effectual agent in so doing was consecrated custom; but then that custom gathered over everything, arrested all onward progress, and stayed the originality of mankind. If, therefore, a nation is able to gain the benefit of custom without the evil, — if after ages of waiting it can have order and choice together, — at once the fatal clog is removed, and the ordinary springs of progress, as in a modern community we conceive them, begin their elastic action.

Discussion, too, has incentives to progress peculiar to itself. It gives a premium to intelligence. To set out the arguments required to determine political action with such force and effect that they really should determine it is a high and great exertion of intellect. Of course all such arguments are produced under conditions; the argument abstractedly best is not necessarily the winning argument. Political discussion must move those who have to act; it must be framed in the ideas, and be consonant with the precedent, of its time, just as it must speak its language. But within these marked conditions good discussion is better than bad; no people can bear a government of discussion for a day, which does not, within the boundaries of its prejudices and its ideas, prefer good reasoning to bad reasoning, sound argument to unsound. A prize for argumentative mind is given in free states, to which no other states have anything to compare.

Tolerance, too, is learned in discussion, and, as history shows, is only so learned. In all customary societies bigotry is the ruling principle. In rude places to this day any one who says anything new is looked on with suspicion, and is persecuted by opinion if not injured by penalty. One of the greatest pains to human nature is the pain of a new idea. It is, as common people say, so "upsetting"; it makes you think that, after all, your favorite notions may be wrong, your firmest beliefs ill founded; it is certain that till now there was no place allotted in your mind to the new and startling inhabitant, and now that it has conquered an entrance, you do not at once see which of your old ideas it will or will not turn out, with which of them it can be reconciled, and with which it is at essential enmity. Naturally, therefore, common men hate a new idea, and are disposed more or less to illtreat the original man who brings it. Even nations with long habits of discussion are intolerant enough. In England, where there is on the whole probably a freer discussion of a greater number of subjects than ever was before in the world, we know how much power bigotry retains. But discussion, to be successful, requires tolerance. It fails wherever, as in a French political assembly, any one who hears anything which he dislikes tries to howl it down. If we know that a nation is capable of enduring continuous discussion, we know that it is capable of practicing with equanimity continuous tolerance.

The power of a government by discussion as an instrument of elevation plainly depends — other things being equal — on the greatness or littleness of the things to be discussed. There are periods when great ideas are "in the air," and when, from some cause or other, even common persons seem to partake of an unusual elevation. The age of Elizabeth in England was conspicuously such a time. The new idea of the Reformation in religion, and the enlargement of the *moenia mundi* by the discovery of new and singular lands, taken together, gave an impulse to thought which few, if any, ages can equal. The discussion, though not wholly free, was yet far freer than in the average of ages and countries. Accordingly every pursuit seemed to start forward. Poetry, science, and architecture, different as they are,

and removed as they all are at first sight from such an influence as discussion, were suddenly started onward. Macaulay would have said you might rightly read the power of discussion "in the poetry of Shakespeare, in the prose of Bacon, in the oriel of Longleat, and the stately pinnacles of Burleigh." This is, in truth, but another case of the principle of which I have had occasion to say so much as to the character of ages and countries. If any particular power is much prized in an age, those possessed of that power will be imitated; those deficient in that power will be despised. In consequence an unusual quantity of that power will be developed, and be conspicuous. Within certain limits vigorous and elevated thought was respected in Elizabeth's time, and, therefore, vigorous and elevated thinkers were many; and the effect went far beyond the cause. It penetrated into physical science, for which very few men cared; and it began a reform in philosophy to which almost all were then opposed. In a word, the temper of the age encouraged originality, and in consequence original men started into prominence, went hither and thither where they liked, arrived at goals which the age never expected, and so made it ever memorable.

In this manner all the great movements of thought in ancient and modern times have been nearly connected in time with government by discussion. Athens, Rome, the Italian republics of the Middle Ages, the communes and states-general of feudal Europe, have all had a special and peculiar quickening influence, which they owed to their freedom, and which states without that freedom have never communicated. And it has been at the time of great epochs of thought — at the Peloponnesian War, at the fall of the Roman Republic, at the Reformation, at the French Revolution — that such liberty of speaking and thinking have produced their full effect.

It is on this account that the discussions of savage tribes have produced so little effect in emancipating those tribes from their despotic customs. The oratory of the North American Indian — the first savage whose peculiarities fixed themselves in the public imagination — has become celebrated, and yet the North American Indians were scarcely, if at all, better orators than many

other savages. Almost all of the savages who have melted away before the Englishman were better speakers than he is. But the oratory of the savages has led to nothing, and was likely to lead to nothing. It is a discussion not of principles but of undertakings; its topics are whether expedition A will answer, and should be undertaken; whether expedition B will not answer, and should not be undertaken; whether village A is the best village to plunder, or whether village B is a better. Such discussions augment the vigor of language, encourage a debating facility, and develop those gifts of demeanor and of gesture which excite the confidence of the hearers. But they do not excite the speculative intellect, do not lead men to argue speculative doctrines, or to question ancient principles. They, in some material respects, improve the sheep within the fold; but they do not help them or incline them to leap out of the fold.

The next question, therefore, is, Why did discussions in some cases relate to prolific ideas, and why did discussions in other cases relate only to isolated transactions? The reply which history suggests is very clear and very remarkable. Some races of men at our earliest knowledge of them have already acquired the basis of a free constitution; they have already the rudiments of a complex polity, — a monarch, a senate, and a general meeting of citizens. The Greeks were one of those races, and it happened, as was natural, that there was in process of time a struggle, the earliest that we know of, between the aristocratical party, originally represented by the senate, and the popular party, represented by the "general meeting." This is plainly a question of principle, and its being so has led to its history being written more than two thousand years afterwards in a very remarkable manner. Some seventy years ago an English country gentleman named Mitford, who, like so many of his age, had been terrified into aristocratic opinions by the first French Revolution, suddenly found that the history of the Peloponnesian War was the reflex of his own time. He took up his Thucydides, and there he saw, as in a mirror, the progress and the struggles of his age. It required some freshness of mind to see this; at least, it had been hidden for many centuries. All the modern

histories of Greece before Mitford had but the vaguest idea of it; and not being a man of supreme originality, he would doubtless have had very little idea of it either, except that the analogy of what he saw helped him by a telling object lesson to the understanding of what he read. Just as in every country of Europe in 1793 there were two factions, one of the Old-World aristocracy, and the other of the incoming democracy, just so there was in every city of ancient Greece, in the year 400 B.C., one party of the many and another of the few. This Mr. Mitford perceived, and being a strong aristocrat, he wrote a "history," which is little except a party pamphlet, and which, it must be said, is even now readable on that very account. The vigor of passion with which it was written puts life into the words, and retains the attention of the reader. And that is not all. Mr. Grote, the great scholar whom we have had lately to mourn, also recognizing the identity between the struggles of Athens and Sparta and the struggles of our modern world, and taking violently the contrary side to that of Mitford, being as great a democrat as Mitford was an aristocrat, wrote a reply, far above Mitford's history in power and learning, but being in its main characteristic almost identical, being above all things a book of vigorous political passion, written for persons who care for politics, and not, as almost all histories of antiquity are and must be, the book of a man who cares for scholarship more than for anything else, written mainly, if not exclusively, for scholars. And the effect of fundamental political discussion was the same in ancient as in modern times. All the customary ways of thought were at once shaken by it, and shaken not only in the closets of philosophers but in the common thought and daily business of ordinary men. The "liberation of humanity," as Goethe used to call it — the deliverance of men from the yoke of inherited usage, and of rigid, unquestionable law — was begun in Greece, and had many of its greatest effects, good and evil, on Greece. It is just because of the analogy between the controversies of that time and those of our times that some one has said, "Classical history is a part of modern history; it is mediæval history only which is ancient."

If there had been no discussion of principle in Greece, probably she would still have produced works of art. Homer contains no such discussion. The speeches in the *Iliad*, which Mr. Gladstone, the most competent of living judges, maintains to be the finest ever composed by man, are not discussions of principle. There is no more tendency in them to critical disquisition than there is to political economy. In Herodotus you have the beginning of the age of discussion. He belongs in his essence to the age which is going out. He refers with reverence to established ordinance and fixed religion. Still, in his travels through Greece, he must have heard endless political arguments; and accordingly you can find in his book many incipient traces of abstract political disquisition. The discourses on democracy, aristocracy, and monarchy, which he puts into the mouths of the Persian conspirators when the monarchy was vacant, have justly been called absurd, as speeches supposed to have been spoken by those persons. No Asiatic ever thought of such things. You might as well imagine Saul or David speaking them as those to whom Herodotus attributes them. They are Greek speeches, full of free Greek discussion, and suggested by the experience, already considerable, of the Greeks in the results of discussion. The age of debate is beginning, and even Herodotus, the least of a wrangler of any man, and the most of a sweet and simple narrator, felt the effect. When we come to Thucydides, the results of discussion are as full as they have ever been; his light is pure, "dry light," free from the "humors" of habit, and purged from consecrated usage. As Grote's history often reads like a report to Parliament, so half Thucydides reads like a speech, or materials for a speech, in the Athenian assembly. Of later times it is unnecessary to speak. Every page of Aristotle and Plato bears ample and indelible trace of the age of discussion in which they lived; and thought cannot possibly be freer. The deliverance of the speculative intellect from traditional and customary authority was altogether complete.

No doubt the "detachment" from prejudice, and the subjection to reason, which I ascribe to ancient Athens, only went down a very little way among the population of it. Two great

classes of the people, the slaves and women, were almost excluded from such qualities; even the free population doubtless contained a far greater proportion of very ignorant and very superstitious persons than we are in the habit of imagining. We fix our attention on the best specimens of Athenian culture, — on the books which have descended to us, — and we forget that the corporate action of the Athenian people at various critical junctures exhibited the most gross superstition. Still, as far as the intellectual and cultivated part of society is concerned, the triumph of reason was complete; the minds of the highest philosophers were then as ready to obey evidence and reason as they have ever been since; probably they were more ready. The rule of custom over them at least had been wholly broken, and the primary conditions of intellectual progress were in that respect satisfied.

It may be said that I am giving too much weight to the classical idea of human development; that history contains the record of another progress as well; that in a certain sense there was progress in Judæa as well as in Athens. And unquestionably there was progress, but it was only progress upon a single subject. If we except religion and omit also all that the Jews had learned from foreigners, it may be doubted if there be much else new between the time of Samuel and that of Malachi. In religion there was progress, but without it there was not any. This was due to the cause of that progress. All over antiquity, all over the East, and over other parts of the world which preserve more or less nearly their ancient condition, there are two classes of religious teachers, — one, the priests, the inheritors of past accredited inspiration; the other, the prophet, the possessor of a like present inspiration. Curtius describes the distinction well in relation to the condition of Greece with which history first presents us.

“The mantic art is an institution totally different from the priesthood. It is based on the belief that the gods are in constant proximity to men, and in their government of the world, which comprehends everything, both great and small, will not disdain to manifest their will; nay, it seems necessary that,

whenever any hitch has arisen in the moral system of the human world, this should also manifest itself by some sign in the world of nature, if only mortals are able to understand and avail themselves of these divine hints.

“For this a special capacity is requisite; not a capacity which can be learned like a human art or science, but rather a peculiar state of grace in the case of single individuals and single families whose ears and eyes are opened to the divine revelations, and who participate more largely than the rest of mankind in the divine spirit. Accordingly it is their office and calling to assert themselves as organs of the divine will; they are justified in opposing their authority to every power of the world. On this head conflicts were unavoidable, and the reminiscences living in the Greek people, of the agency of a Tiresias and Calchas, prove how the Heroic kings experienced not only support and aid but also opposition and violent protests from the mouths of the men of prophecy.”

In Judæa there was exactly the same opposition as elsewhere. All that is new comes from the prophets; all which is old is retained by the priests. But the peculiarity of Judæa—a peculiarity which I do not for a moment pretend that I can explain—is that the prophetic revelations are, taken as a whole, indisputably improvements; that they contain, as time goes on, at each succeeding epoch, higher and better views of religion. But the peculiarity is not to my present purpose. My point is that there is no such spreading impetus in progress thus caused as there is in progress caused by discussion. To receive a particular conclusion upon the *ipse dixit*, upon the accepted authority of an admired instructor, is obviously not so vivifying to the argumentative and questioning intellect as to argue out conclusions for yourself. Accordingly the religious progress caused by the prophets did not break down that ancient code of authoritative usage. On the contrary, the two combined. In each generation the conservative influence “built the sepulchers” and accepted the teaching of past prophets, even while it was slaying and persecuting those who were living. But discussion and custom cannot be thus combined; their “method,” as modern philosophers

would say, is antagonistic. Accordingly, the progress of the classical states gradually awakened the whole intellect; that of Judæa was partial and improved religion only. And, therefore, in a history of intellectual progress, the classical fills the superior and the Jewish the inferior place; just as in a special history of theology only, the places of the two might be interchanged.

A second experiment has been tried on the same subject-matter. The characteristic of the Middle Ages may be approximately — though only approximately — described as a return to the period of authoritative usage and as an abandonment of the classical habit of independent and self-choosing thought. I do not for an instant mean that this is an exact description of the main mediæval characteristic; nor can I discuss how far that characteristic was an advance upon those of previous times; its friends say it is far better than the peculiarities of the classical period; its enemies, that it is far worse. But both friends and enemies will admit that the most marked feature of the Middle Ages may roughly be described as I have described it. And my point is that just as this mediæval characteristic was that of a return to the essence of the customary epoch which had marked the pre-Athenian times, so it was dissolved much in the same manner as the influence of Athens, and other influences like it, claim to have dissolved that customary epoch.

The principal agent in breaking up the persistent mediæval customs, which were so fixed that they seemed likely to last forever, or till some historical catastrophe overwhelmed them, was the popular element in the ancient polity which was everywhere diffused in the Middle Ages. The Germanic tribes brought with them from their ancient dwelling place a polity containing, like the classical, a king, a council, and a popular assembly; and wherever they went, they carried these elements and varied them, as force compelled or circumstances required. As far as England is concerned, the excellent dissertations of Mr. Freeman and Mr. Stubbs have proved this in the amplest manner, and brought it home to persons who cannot claim to possess much antiquarian learning. The history of the English constitution, as far as the world cares for it, is, in fact, the complex history of the popular

element in this ancient polity, which was sometimes weaker and sometimes stronger, but which has never died out, has commonly possessed great though varying power, and is now entirely predominant. The history of this growth is the history of the English people; and the discussions about this constitution and the discussions within it, the controversies as to its structure and the controversies as to its true effects, have mainly trained the English political intellect, in so far as it is trained. But in much of Europe, and in England particularly, the influence of religion has been very different from what it was in antiquity. It has been an influence of discussion. Since Luther's time there has been a conviction, more or less rooted, that a man may by an intellectual process think out a religion for himself, and that, as the highest of all duties, he ought to do so. The influence of the political discussion and the influence of the religious discussion have been so long and so firmly combined, and have so effectually enforced one another, that the old notions of loyalty, and fealty, and authority, as they existed in the Middle Ages, have now over the best minds almost no effect.

It is true that the influence of discussion is not the only force which has produced this vast effect. Both in ancient and in modern times other forces coöperated with it. Trade, for example, is obviously a force which has done much to bring men of different customs and different beliefs into close contiguity, and has thus aided to change the customs and the beliefs of them all. Colonization is another such influence: it settles men among aborigines of alien race and usages, and it commonly compels the colonists not to be overstrict in the choice of their own elements; they are obliged to coalesce with and "adopt" useful bands and useful men, though their ancestral customs may not be identical, nay, though they may be, in fact, opposite to their own. In modern Europe the existence of a cosmopolite church, claiming to be above nations, and really extending through nations, and the scattered remains of Roman law and Roman civilization coöperated with the liberating influence of political discussion. And so did other causes also. But perhaps in no case have these subsidiary causes alone been able to

generate intellectual freedom ; certainly in all the most remarkable cases the influence of discussion has presided at the creation of that freedom, and has been active and dominant in it.

No doubt apparent cases of exception may easily be found. It may be said that in the court of Augustus there was much general intellectual freedom, an almost entire detachment from ancient prejudice, but that there was no free political discussion at all. But, then, the ornaments of that time were derived from a time of great freedom ; it was the republic which trained the men whom the empire ruled. The close congregation of most miscellaneous elements under the empire was, no doubt, of itself unfavorable to inherited prejudice, and favorable to intellectual exertion. Yet, except in the instance of the church, which is a peculiar subject that requires a separate discussion, how little was added to what the republic left ! The power of free interchange of ideas being wanting, the ideas themselves were barren. Also, no doubt, much intellectual freedom may emanate from countries of free political discussion, and penetrate to countries where that discussion is limited. Thus the intellectual freedom of France in the eighteenth century was in great part owing to the proximity of and incessant intercourse with England and Holland. Voltaire resided among us ; and every page of the *Esprit des Lois* proves how much Montesquieu learned from living here. But, of course, it was only part of the French culture which was so derived: the germ might be foreign, but the tissue was native. And very naturally, for it would be absurd to call the *ancien régime* a government without discussion: discussion abounded there, only, by reason of the bad form of the government, it was never sure with ease and certainty to affect political action. The despotism "tempered by epigram" was a government which permitted argument of licentious freedom within changing limits, and which was ruled by that argument spasmodically and practically, though not in name or consistently.

But though in the earliest and in the latest time government by discussion has been a principal organ for improving mankind, yet, from its origin, it is a plant of singular delicacy. At first

the chances are much against its living. In the beginning, the members of a free state are of necessity few. The essence of it requires that discussion shall be brought home to those members. But in early time, when writing is difficult, reading rare, and representation undiscovered, those who are to be guided by the discussion must hear it with their own ears, must be brought face to face with the orator, and must feel his influence for themselves. The first free states were little towns, smaller than any political division which we now have, except the republic of Andora, which is a sort of vestige of them. It is in the market place of the country town, as we should now speak, and in petty matters concerning the market town that discussion began, and thither all the long train of its consequences may be traced back. Some historical inquirers, like myself, can hardly look at such a place without some sentimental musing, poor and trivial as the thing seems. But such small towns are very feeble. Numbers in the earliest wars, as in the latest, are a main source of victory. And in early times one kind of state is very common and is exceedingly numerous. In every quarter of the globe we find great populations compacted by traditional custom and consecrated sentiment, which are ruled by some soldier, — generally some soldier of a foreign tribe, who has conquered them, and, as it has been said, “ vaulted on the back ” of them, or whose ancestors have done so. These great populations, ruled by a single will, have, doubtless, trodden down and destroyed innumerable little cities that were just beginning their freedom.

In this way the Greek cities in Asia were subjected to the Persian power, and so *ought* the cities in Greece proper to have been subjected also. Every schoolboy must have felt that nothing but amazing folly and unmatched mismanagement saved Greece from conquest both in the time of Xerxes and in that of Darius. The fortunes of intellectual civilization were then at the mercy of what seems an insignificant probability. If the Persian leaders had only shown that decent skill and ordinary military prudence which it was likely they would show, Grecian freedom would have been at an end. Athens, like so many Ionian cities on the other side of the Ægean, would have been absorbed into a great

despotism ; all we now remember her for we should not remember, for it would never have occurred. Her citizens might have been ingenious, and imitative, and clever ; they could not certainly have been free and original. Rome was preserved from subjection to a great empire by her fortunate distance from one. The early wars of Rome are with cities like Rome, — about equal in size, though inferior in valor. It was only when she had conquered Italy that she began to measure herself against Asiatic despotisms. She became great enough to beat them before she advanced far enough to contend with them. But such great good fortune was and must be rare. Unnumbered little cities which might have rivaled Rome or Athens doubtless perished without a sign long before history was imagined. The small size and slight strength of early free states made them always liable to easy destruction.

And their internal frailty is even greater. As soon as discussion begins the savage propensities of men break forth ; even in modern communities, where those propensities, too, have been weakened by ages of culture, and repressed by ages of obedience, as soon as a vital topic for discussion is well started the keenest and most violent passions break forth. Easily destroyed as are early free states by forces from without, they are even more liable to destruction by forces from within.

On this account such states are very rare in history. Upon the first view of the facts a speculation might even be set up that they were peculiar to a particular race. By far the most important free institutions, and the only ones which have left living representatives in the world, are the offspring either of the first constitutions of the classical nations or of the first constitutions of the Germanic nations. All living freedom runs back to them, and those truths which at first sight would seem the whole of historical freedom can be traced to them. And both the Germanic and the classical nations belong to what ethnologists call the Aryan race. Plausibly it might be argued that the power of forming free states was superior in and peculiar to that family of mankind. But unfortunately for this easy theory the facts are inconsistent with it. In the first place, all the so-called

Aryan race certainly is not free. The Eastern Aryans — those, for example, who speak languages derived from the Sanskrit — are amongst the most slavish divisions of mankind. To offer the Bengalese a free constitution, and to expect them to work one, would be the maximum of human folly. There then must be something else besides Aryan descent which is necessary to fit men for discussion and train them for liberty; and, what is worse for the argument we are opposing, some non-Aryan races have been capable of freedom. Carthage, for example, was a Semitic republic. We do not know all the details of its constitution, but we know enough for our present purpose. We know that it was a government in which many proposers took part, and under which discussion was constant, active, and conclusive. No doubt Tyre, the parent city of Carthage, the other colonies of Tyre besides Carthage, and the colonies of Carthage were all as free as Carthage. We have thus a whole group of ancient republics of non-Aryan race, and one which, being more ancient than the classical republics, could not have borrowed from or imitated them. So that the theory which would make government by discussion the exclusive patrimony of a single race of mankind is on the face of it untenable.

I am not prepared with any simple counter theory. I cannot profess to explain completely why a very small minimum of mankind were, as long as we know of them, possessed of a polity which as time went on suggested discussions of principle, and why the great majority of mankind had nothing like it. This is almost as hopeless as asking why Milton was a genius and why Bacon was a philosopher. Indeed it is the same, because the causes which give birth to the startling varieties of individual character, and those which give birth to similar varieties of national character, are, in fact, the same. I have, indeed, endeavored to show that a marked type of individual character once originating in a nation, and once strongly preferred by it, is likely to be fixed on it and to be permanent in it, from causes which were stated. Granted the beginning of the type, we may, I think, explain its development and aggravation; but we cannot in the least explain why the incipient type of curious characters

broke out, if I may so say, in one place rather than in another. Climate and "physical" surroundings, in the largest sense, have unquestionably much influence; they are one factor in the cause, but they are not the only factor; for we find most dissimilar races of men living in the same climate and affected by the same surroundings, and we have every reason to believe that those unlike races have so lived as neighbors for ages. The cause of types must be something outside the tribe acting on something within,—something inherited by the tribe. But what that something is I do not know that any one can in the least explain.

The following conditions may, I think, be historically traced to the nation capable of a polity, which suggests principles for discussion, and so leads to progress. First, the nation must possess the *patria potestas* in some form so marked as to give family life distinctness and precision, and to make a home education and a home discipline probable and possible. While descent is traced only through the mother, and while the family is therefore a vague entity, no progress to a high polity is possible. Secondly, that polity would seem to have been created very gradually; by the aggregation of families into clans or gentes, and of clans into nations, and then again by the widening of nations, so as to include circumjacent outsiders, as well as the first compact and sacred group, the number of parties to a discussion was at first augmented very slowly. Thirdly, the number of "open" subjects,—as we should say nowadays,—that is, of subjects on which public opinion was optional, and on which discussion was admitted, was at first very small. Custom ruled everything originally, and the area of free argument was enlarged but very slowly. If I am at all right, that area could only be enlarged thus slowly, for custom was in early days the cement of society, and if you suddenly questioned such custom you would destroy society. But though the existence of these conditions may be traced historically, and though the reason of them may be explained philosophically, they do not completely solve the question why some nations have the polity and some not; on the contrary, they plainly leave a large "residual phenomenon" unexplained and unknown.

In this manner politics or discussion broke up the old bonds of custom which were now strangling mankind, though they had once aided and helped it. But this is only one of the many gifts which those politics have conferred, are conferring, and will confer on mankind. I am not going to write an eulogium on liberty, but I wish to set down three points which have not been sufficiently noticed.

Civilized ages inherit the human nature which was victorious in barbarous ages, and that nature is, in many respects, not at all suited to civilized circumstances. A main and principal excellence in the early times of the human races is the impulse to action. The problems before men are then plain and simple. The man who works hardest, the man who kills the most deer, the man who catches the most fish — even later on, the man who tends the largest herds, or the man who tills the largest field — is the man who succeeds; the nation which is quickest to kill its enemies, or which kills most of its enemies, is the nation which succeeds. All the inducements of early society tend to foster immediate action; all its penalties fall on the man who pauses; the traditional wisdom of those times was never weary of inculcating that “delays are dangerous,” and that the sluggish man — the man “who roasteth not that which he took in hunting” — will not prosper on the earth, and indeed will very soon perish out of it. And in consequence an inability to stay quiet, an irritable desire to act directly, is one of the most conspicuous failings of mankind.

Pascal said that most of the evils of life arose from “man’s being unable to sit still in a room”; and though I do not go that length, it is certain that we should have been a far wiser race than we are if we had been readier to sit quiet, — we should have known much better the way in which it was best to act when we came to act. The rise of physical science, the first great body of practical truth provable to all men, exemplifies this in the plainest way. If it had not been for quiet people, who sat still and studied the sections of the cone, if other quiet people had not sat still and studied the theory of infinitesimals, or other quiet people had not sat still and worked out the

doctrine of chances, the most "dreamy moonshine," as the purely practical mind would consider, of all human pursuits; if "idle stargazers" had not watched long and carefully the motions of the heavenly bodies, — our modern astronomy would have been impossible, and without our astronomy "our ships, our colonies, our seamen," all which makes modern life modern life could not have existed. Ages of sedentary, quiet, thinking people were required before that noisy existence began, and without those pale preliminary students it never could have been brought into being. And nine tenths of modern science is in this respect the same: it is the produce of men whom their contemporaries thought dreamers, — who were laughed at for caring for what did not concern them, — who, as the proverb went, "walked into a well from looking at the stars," — who were believed to be useless, if any one could be such. And the conclusion is plain that if there had been more such people, if the world had not laughed at those there were, if rather it had encouraged them, there would have been a great accumulation of proved science ages before there was. It was the irritable activity, the "wish to be doing something," that prevented it. Most men inherited a nature too eager and too restless to be quiet and find out things; and even worse, — with their idle clamor they "disturbed the brooding hen," they would not let those be quiet who wished to be so, and out of whose calm thought much good might have come forth.

If we consider how much science has done and how much it is doing for mankind, and if the overactivity of men is proved to be the cause why science came so late into the world, and is so small and scanty still, that will convince most people that our overactivity is a very great evil. But this is only part, and perhaps not the greatest part of the harm that overactivity does. As I have said, it is inherited from times when life was simple, objects were plain, and quick action generally led to desirable ends. If A kills B before B kills A, then A survives, and the human race is a race of A's. But the issues of life are plain no longer. To act rightly in modern society requires a great deal of previous study, a great deal of assimilated information, a great deal of sharpened imagination; and these

prerequisites of sound action require much time, and, I was going to say, much "lying in the sun," a long period of "mere passiveness." Even the art of killing one another, which at first particularly trained men to be quick, now requires them to be slow. A hasty general is the worst of generals nowadays; the best is a sort of Von Moltke, who is passive if any man ever was passive; who is "silent in seven languages"; who possesses more and better accumulated information as to the best way of killing people than any one who ever lived. This man plays a restrained and considerate game of chess with his enemy. I wish the art of benefiting men had kept pace with the art of destroying them; for though war has become slow, philanthropy has remained hasty. The most melancholy of human reflections, perhaps, is that, on the whole, it is a question whether the benevolence of mankind does most good or harm. Great good, no doubt, philanthropy does, but then it also does great evil. It augments so much vice, it multiplies so much suffering, it brings to life such great populations to suffer and to be vicious, that it is open to argument whether it be or be not an evil to the world, and this is entirely because excellent people fancy that they can do much by rapid action, — that they will most benefit the world when they most relieve their own feelings; that as soon as an evil is seen "something" ought to be done to stay and prevent it. One may incline to hope that the balance of good over evil is in favor of benevolence; one can hardly bear to think that it is not so; but anyhow it is certain that there is a most heavy debit of evil, and that this burden might almost all have been spared us if philanthropists as well as others had not inherited from their barbarous forefathers a wild passion for instant action.

Even in commerce, which is now the main occupation of mankind, and one in which there is a ready test of success and failure wanting in many higher pursuits, the same disposition to excessive action is very apparent to careful observers. Part of every mania is caused by the impossibility to get people to confine themselves to the amount of business for which their capital is sufficient, and in which they can engage safely. In some

degree, of course, this is caused by the wish to get rich, but in a considerable degree, too, by the mere love of activity. There is a greater propensity to action in such men than they have the means of gratifying. Operations with their own capital will only occupy four hours of the day, and they wish to be active and to be industrious for eight hours, and so they are ruined. If they could only have sat idle the other four hours, they would have been rich men. The amusements of mankind, at least of the English part of mankind, teach the same lesson. Our shooting, our hunting, our traveling, our climbing, have become laborious pursuits. It is a common saying abroad that "an Englishman's notion of a holiday is a fatiguing journey"; and this is only another way of saying that the immense energy and activity which have given us our place in the world have in many cases descended to those who do not find in modern life any mode of using that activity and of venting that energy.

Even the abstract speculations of mankind bear conspicuous traces of the same excessive impulse. Every sort of philosophy has been systematized, and yet as these philosophies utterly contradict one another, most of them cannot be true. Unproved abstract principles without number have been eagerly caught up by sanguine men, and then carefully spun out into books and theories, which were to explain the whole world. But the world goes clear against these abstractions, and it must do so, as they require it to go in antagonistic directions. The mass of a system attracts the young and impresses the unwary; but cultivated people are very dubious about it. They are ready to receive hints and suggestions, and the smallest real truth is ever welcome. But a large book of deductive philosophy is much to be suspected. No doubt the deductions may be right; in most writers they are so; but where did the premises come from? Who is sure that they are the whole truth, and nothing but the truth, of the matter in hand? Who is not almost sure beforehand that they will contain a strange mixture of truth and error, and therefore that it will not be worth while to spend life in reasoning over their consequences? In a word, the superfluous energy of mankind has flowed over into philosophy, and has

worked into big systems what should have been left as little suggestions.

And if the old systems of thought are not true *as* systems, neither is the new revolt from them to be trusted in its whole vigor. There is the same original vice in that also. There is an excessive energy in revolutions if there is such energy anywhere. The passion for action is quite as ready to pull down as to build up; probably it is more ready, for the task is easier.

Old things need not be therefore true,
O brother men, nor yet the new;
Ah, still awhile the old thought retain,
And yet consider it again.

But this is exactly what the human mind will not do. It will not "consider it again."

But it will be said, What has government by discussion to do with these things? Will it prevent them, or even mitigate them? It can and does do both in the very plainest way. If you want to stop instant and immediate action, always make it a condition that the action shall not begin till a considerable number of persons have talked over it, and have agreed on it. If those persons be people of different temperaments, different ideas, and different educations, you have an almost infallible security that nothing, or almost nothing, will be done with excessive rapidity. Each kind of persons will have their spokesman; each spokesman will have his characteristic objection, and each his characteristic counter proposition, and so in the end nothing will probably be done, or at least only the minimum which is plainly urgent. In many cases this delay may be dangerous; in many cases quick action will be preferable. A campaign, as Macaulay well says, cannot be directed by a "debating society"; and many other kinds of action also require a single and absolute general. But for the purpose now in hand — that of preventing hasty action, and insuring elaborate consideration — there is no device like a polity of discussion.

The enemies of this object — the people who want to act quickly — see this very distinctly. They are forever explaining

that the present is "an age of committees," that the committees do nothing, that all evaporates in talk. Their great enemy is parliamentary government; they call it, after Mr. Carlyle, the "national palaver"; they add up the hours that are consumed in it, and the speeches which are made in it, and they sigh for a time when England might again be ruled, as it once was, by a Cromwell, — that is, when an eager, absolute man might do exactly what other eager men wished, and do it immediately. All these invectives are perpetual and many-sided; they come from philosophers, each of whom wants some new scheme tried; from philanthropists, who want some evil abated; from revolutionists, who want some old institution destroyed; from new eraists, who want their new era started forthwith. And they all are distinct admissions that a polity of discussion is the greatest hindrance to the inherited mistake of human nature, to the desire to act promptly, which in a simple age is so excellent, but which in a later and complex time leads to so much evil.

The same accusation against our age sometimes takes a more general form. It is alleged that our energies are diminishing; that ordinary and average men have not the quick determination nowadays which they used to have when the world was younger; that not only do not committees and parliaments act with rapid decisiveness but that no one now so acts. And I hope that in fact this is true, for, according to me, it proves that the hereditary barbaric impulse is decaying and dying out. So far from thinking the quality attributed to us a defect, I wish that those who complain of it were far more right than I much fear they are. Still, certainly, eager and violent action *is* somewhat diminished, though only by a small fraction of what it ought to be. And I believe that this is in great part due, in England at least, to our government by discussion, which has fostered a general intellectual tone, a diffused disposition to weigh evidence, a conviction that much may be said on every side of everything which the elder and more fanatic ages of the world wanted. This is the real reason why our energies seem so much less than those of our fathers. When we have a definite end in view, which we know we want, and which we think we know

how to obtain, we can act well enough. The campaigns of our soldiers are as energetic as any campaigns ever were; the speculations of our merchants have greater promptitude, greater audacity, greater vigor than any such speculations ever had before. In old times a few ideas got possession of men and communities, but this is happily now possible no longer. We see how incomplete these old ideas were; how almost by chance one seized on one nation, and another on another; how often one set of men have persecuted another set for opinions on subjects of which neither, we now perceive, knew anything. It might be well if a greater number of effectual demonstrations existed among mankind; but while no such demonstrations exist, and while the evidence which completely convinces one man seems to another trifling and insufficient, let us recognize the plain position of inevitable doubt. Let us not be bigots with a doubt, and persecutors without a creed. We are beginning to see this, and we are railed at for so beginning. But it is a great benefit, and it is to the incessant prevalence of detective discussion that our doubts are due; and much of that discussion is due to the long existence of a government requiring constant debates, written and oral.

This is one of the unrecognized benefits of free government, one of the modes in which it counteracts the excessive inherited impulses of humanity. There is another also for which it does the same, but which I can only touch delicately, and which at first sight will seem ridiculous. The most successful races, other things being equal, are those which multiply the fastest. In the conflicts of mankind numbers have ever been a great power. The most numerous group has always had an advantage over the less numerous, and the fastest breeding group has always tended to be the most numerous. In consequence, human nature has descended into a comparatively uncontentious civilization, with a desire far in excess of what is needed; with a "felt want," as political economists would say, altogether greater than the "real want." A walk in London is all that is necessary to establish this. "The great sin of great cities" is one vast evil consequent upon it. And who is to reckon up how

much these words mean? How many spoiled lives, how many broken hearts, how many wasted bodies, how many ruined minds, how much misery pretending to be gay, how much gayety feeling itself to be miserable, how much after mental pain, how much eating and transmitted disease! And in the moral part of the world, how many minds are racked by incessant anxiety, how many thoughtful imaginations which might have left something to mankind are debased to mean cares, how much every successive generation sacrifices to the next, how little does any of them make of itself in comparison with what might be! And how many Irelands have there been in the world where men would have been contented and happy if they had only been fewer; how many more Irelands would there have been if the intrusive numbers had not been kept down by infanticide and vice and misery! How painful is the conclusion that it is dubious whether all the machines and inventions of mankind "have yet lightened the day's labor of a human being"! They have enabled more people to exist, but these people work just as hard and are just as mean and miserable as the elder and the fewer.

But it will be said of this passion just as it was said of the passion of activity. Granted that it is in excess, how can you say, how on earth can any one say, that government by discussion can in any way cure or diminish it? Cure this evil — that government certainly will not; but tend to diminish it — I think it does and may. To show that I am not making premises to support a conclusion so abnormal, I will quote a passage from Mr. Spencer, the philosopher who has done most to illustrate this subject.

"That future progress of civilization which the never-ceasing pressure of population must produce will be accompanied by an enhanced cost of Individuation, both in structure and function; and more especially in nervous structure and function. The peaceful struggle for existence in societies ever growing more crowded and more complicated must have for its concomitant an increase of the great nervous centers in mass, in complexity, in activity. The larger body of emotion needed as a fountain of energy for men who have to hold their places and rear their

families under the intensifying competition of social life is, other things equal, the correlative of larger brain. Those higher feelings presupposed by the better self-regulation which, in a better society, can alone enable the individual to leave a persistent posterity are, other things equal, the correlatives of a more complex brain; as are also those more numerous, more varied, more general, and more abstract ideas, which must also become increasingly requisite for successful life as society advances. And the genesis of this larger quantity of feeling and thought in a brain thus augmented in size and developed in structure is, other things equal, the correlative of a greater wear of nervous tissue and greater consumption of materials to repair it. So that both in original cost of construction and in subsequent cost of working, the nervous system must become a heavier tax on the organism. Already the brain of the civilized man is larger by nearly thirty per cent than the brain of the savage. Already, too, it presents an increased heterogeneity, especially in the distribution of its convolutions. And further changes, like these which have taken place under the discipline of civilized life, we infer will continue to take place. . . . But everywhere and always evolution is antagonistic to procreative dissolution. Whether it be in greater growth of the organs which subserve self-maintenance, whether it be in their added complexity of structure, or whether it be in their higher activity, the abstraction of the required materials implies a diminished reserve of materials for race maintenance. And we have seen reason to believe that this antagonism between Individuation and Genesis becomes unusually marked where the nervous system is concerned, because of the costliness of nervous structure and function. In sec. 346¹ was pointed out the apparent connection between high cerebral development and prolonged delay of sexual maturity; and in secs. 366, 367,¹ the evidence went to show that where exceptional fertility exists there is sluggishness of mind, and that where there has been during education excessive expenditure in mental action, there frequently follows a complete or partial infertility. Hence the particular kind of further evolution which

¹ These references are to Bagehot's *Physics and Politics*.

man is hereafter to undergo is one which, more than any other, may be expected to cause a decline in his power of reproduction."

This means that men who have to live an intellectual life, or who can be induced to lead one, will be likely not to have so many children as they would otherwise have had. In particular cases this may not be true; such men may even have many children, — they may be men of unusual power and vigor in all respects. But they will not have their maximum of posterity, — will not have so many as they would have had if they had been careless or thoughtless men; and so, upon an average, the issue of such intellectualized men will be less numerous than those of the unintellectual.

Now, supposing this philosophical doctrine to be true, — and the best philosophers, I think, believe it, — its application to the case in hand is plain. Nothing promotes intellect like intellectual discussion, and nothing promotes intellectual discussion so much as government by discussion. The perpetual atmosphere of intellectual inquiry acts powerfully, as every one may see by looking about him in London, upon the constitution both of men and women. There is only a certain *quantum* of power in each of our race; if it goes in one way it is spent, and cannot go in another. The intellectual atmosphere abstracts strength to intellectual matters; it tends to divert that strength which the circumstances of early society directed to the multiplication of numbers; and as a polity of discussion tends, above all things, to produce an intellectual atmosphere, the two things which seemed so far off have been shown to be near, and free government has, in a second case, been shown to tend to cure an inherited excess of human nature.

Lastly, a polity of discussion not only tends to diminish our inherited defects, but also, in one case at least, to augment a heritable excellence. It tends to strengthen and increase a subtle quality or combination of qualities singularly useful in practical life, — a quality which it is not easy to describe exactly, and the issues of which it would require not a remnant of an essay but a whole essay to elucidate completely. This quality I call *animated moderation*.

If any one were asked to describe what it is which distinguishes the writings of a man of genius who is also a great man of the world from all other writings, I think he would use these same words, "animated moderation." He would say that such writings are never slow, are never excessive, are never exaggerated; that they are always instinct with judgment, and yet that judgment is never a dull judgment; that they have as much spirit in them as would go to make a wild writer, and yet that every line of them is the product of a sane and sound writer. The best and almost perfect instance of this in English is Scott. Homer was perfect in it, as far as we can judge; Shakespeare is often perfect in it for long together, though then, from the defects of a bad education and a vicious age, all at once he loses himself in excesses. Still, Homer, and Shakespeare at his best, and Scott, though in other respects so unequal to them, have this remarkable quality in common,—this union of life with measure, of spirit with reasonableness.

In action it is equally this quality in which the English—at least, so I claim it for them—excel all other nations. There is an infinite deal to be laid against us, and as we are unpopular with most others, and as we are always grumbling at ourselves, there is no want of people to say it. But, after all, in a certain sense, England is a success in the world; her career has had many faults, but still it has been a fine and winning career upon the whole. And this on account of the exact possession of this particular quality. What is the making of a successful merchant? That he has plenty of energy, and yet that he does not go too far. And if you ask for a description of a great practical Englishman, you will be sure to have this, or something like it: "Oh, he has plenty of go in him; but he knows when to pull up." He may have all other defects in him; he may be coarse, he may be illiterate, he may be stupid to talk to; still this great union of spur and bridle, of energy and moderation, will remain to him. Probably he will hardly be able to explain why he stops when he does stop, or why he continued to move as long as he, in fact, moved; but still, as by a rough instinct, he pulls up pretty much where he should, though he was going at such a pace before.

There is no better example of this quality in English statesmen than Lord Palmerston. There are, of course, many most serious accusations to be made against him. The sort of homage with which he was regarded in the last years of his life has passed away; the spell is broken, and the magic cannot be again revived. We may think that his information was meager, that his imagination was narrow, that his aims were short-sighted and faulty. But though we may often object to his objects, we rarely find much to criticise in his means. "He went," it has been said, "with a great swing"; but he never tumbled over; he always managed to pull up "before there was any danger." He was an odd man to have inherited Hampden's motto; still, in fact, there was a great trace in him of *mediocria firma*, — as much, probably, as there could be in any one of such great vivacity and buoyancy.

It is plain that this is a quality which as much as, if not more than, any other multiplies good results in practical life. It enables men to see what is good; it gives them intellect enough for sufficient perception; but it does not make men all intellect; it does not "sicken them o'er with the pale cast of thought"; it enables them to do the good things they see to be good, as well as to see that they are good. And it is plain that a government by popular discussion tends to produce this quality. A strongly idiosyncratic mind, violently disposed to extremes of opinion, is soon weeded out of political life, and a bodiless thinker, an ineffectual scholar, cannot even live there for a day. A vigorous moderateness in mind and body is the rule of a polity which works by discussion; and, upon the whole, it is the kind of temper most suited to the active life of such a being as man in such a world as the present one.

These three great benefits of free government, though great, are entirely secondary to its continued usefulness in the mode in which it originally was useful. The first great benefit was the deliverance of mankind from the superannuated yoke of customary law, by the gradual development of an inquisitive originality. And it continues to produce that effect upon persons apparently far remote from its influence, and on subjects with

which it has nothing to do. Thus Mr. Mundella, a most experienced and capable judge, tells us that the English artisan, though so much less sober, less instructed, and less refined than the artisans of some other countries, is yet more inventive than any other artisan. The master will get more good suggestions from him than from any other.

Again, upon plausible grounds — looking, for example, to the position of Locke and Newton in the science of the last century, and to that of Darwin in our own — it may be argued that there is some quality in English thought which makes them strike out as many, if not more, first-rate and original suggestions than nations of greater scientific culture and more diffused scientific interest. In both cases I believe the reason of the English originality to be that government by discussion quickens and enlivens thought all through society; that it makes people think no harm may come of thinking; that in England this force has long been operating, and so it has developed more of all kinds of people ready to use their mental energy in their own way, and not ready to use it in any other way, than a despotic government. And so rare is great originality among mankind, and so great are its fruits, that this one benefit of free government probably outweighs what are in many cases its accessory evils. Of itself it justifies, or goes far to justify, our saying with Montesquieu, "Whatever be the cost of this glorious liberty, we must be content to pay it to heaven."

XXXIII

THE FORMS OF GOVERNMENT¹

And since these points are determined, we proceed next to consider whether one polity only should be established, or more than one; and if more, then how many, and of what sort, and what are the differences between them. Now a polity is the ordering and regulating of the state, and of all its offices, particularly of that wherein the supreme power is lodged; and this power is always possessed by the administration, but the administration itself determines the particular polity. Thus, for instance, in a democracy the supreme power is lodged in the whole people; on the contrary, in an oligarchy it is in the hands of a few. We say, then, that the polity in these states is different, and we shall find the same thing holds good in others. Let us first determine for whose sake a state is established, and point out the different species of rule which relate to mankind and to social life. It has already been mentioned, in the beginning of our treatise, where a definition was made as to the management of a family, and the power of a master, that man is an animal naturally formed for society, and that therefore, even when he does not want any foreign assistance, he will equally desire to live with others; not but that mutual advantage also induces them to it, as far as the share of it enables each person to live agreeably. This is indeed the great object not only to all in general but also to each individual; and they join in society also for the sake of being able to live (for doubtless in this, too, what is agreeable has a share), and they also bind together civil society, even for the sake of preserving life, unless they are grievously overwhelmed with its miseries; for it is very evident

¹ From *The Politics of Aristotle*, Book III, chap. vi; Books IV, V. Translated by Edward Walford.

that men will endure many calamities for the sake of life, as having in itself something naturally sweet and desirable. It is easy to point out the different received modes of government, and we often lay them down in our exoteric discourses. The power of the master, though there is an identity of interest between him who is by nature a master and him who is by nature a slave, yet nevertheless tends especially to the benefit of the master, but accidentally to that of the slave; for if the slave is destroyed, the power of the master is at an end. But the authority which a man has over his wife, and children, and his family, which we call domestic government, is either for the benefit of those who are under subjection, or else for the sake of something common to both; but its essential object is the benefit of the governed, as we see in other arts (in physic, for instance, and the gymnastic exercises), but accidentally it may be for the sake of those who govern; for nothing forbids the master of the exercises from sometimes being himself one of those who take exercise, as the steersman is always one of the sailors; but both the master of the exercises and the steersman consider the good of those who are under their government. But when either of them becomes one of these, it is by accident that he shares in their benefits; for the one becomes a common sailor, and the other one of the wrestlers, though he is master of the exercises. Thus in all political governments, which are established upon the principle of an equality of the citizens, and according to similitude, it is held right to rule by turns. Formerly, as was natural, every one expected that each of his fellow-citizens should in his turn serve the public, and thus administer to his private good, as he himself when in office had done for others. But now every one is desirous of being continually in power, that he may enjoy the advantage which he derives from public business and being in office, as if offices were a never-failing remedy for sickly rulers; for if this were so, no doubt they would be eagerly sought after. It is evident, then, that all those governments which have the common good in view are rightly established and strictly just; but those which have in view only the good of the rulers are all founded on wrong principles, and

are widely different from what a government ought to be, for they are tyrannical ; whereas a state is a community of freemen.

Having established these particulars, the next point is to consider how many different kinds of governments there are; and first we must review those which are correct, for when we have determined this, their defections will be evident enough.

It is evident that every form of government or administration (for the words are of the same import) must contain the supreme power over the whole state, and that this supreme power must necessarily be in the hands of one person, or of a few, or of the many; and that when the one, the few, or the many direct their policy to the common good, such states are well governed; but when the interest of the one, the few, or the many who are in office is alone consulted, a perversion takes place; for we must either affirm that those who share in the community are not citizens, or else let these share in the advantages of government. Now we usually call a state which is governed by one person for the common good a kingdom; one that is governed by more than one, but by a few only, an aristocracy, either because the government is in the hands of the most worthy citizens or because it is the best form for the city and its inhabitants. But when the citizens at large direct their policy to the public good, it is called simply a polity, — a name which is common to all other governments. And this distinction is consonant to reason, for it will be easy to find one person, or a very few, of very distinguished abilities, but most difficult to meet with the majority of a people eminent for every virtue; but if there is one common to a whole nation, it is valor; for this exists among numbers: for which reason, in this state the military have most power, and those who possess arms will have their share in the government. Now the perversions attending each of these governments are these: a kingdom may degenerate into a tyranny, an aristocracy into an oligarchy, and a state into a democracy. Now a tyranny is a monarchy where the good of one man only is the object of government, an oligarchy considers only the rich, and a democracy only the poor; but neither of them have the common good of all in view. . . .

Let us first determine what they lay down as the proper limits of an oligarchy and a democracy, and what is just in each of these forms of government. For all men have some natural inclination to justice, but they proceed therein only to a certain degree, nor can they universally point out what is absolutely just. For instance, what is equal appears just, and is so, but not to all, only among those who are equals; and what is unequal appears just, and is so, but not to all, only among those who are unequals. This relative nature of justice some people neglect, and therefore they judge ill; and the reason of this is, that they judge for themselves, and almost every one is the worst judge in his own case. Since then justice has reference to persons, the same distinctions must be made with respect to persons which are made with respect to things, in the manner that I have already described in my *Ethics*. As to the equality of the things, they are agreed; but their dispute is concerning the equality of the persons, and chiefly for the reason above assigned, because they judge ill in their own cause; and also because each party thinks that if they admit what is right in some particulars, they say what is just on the whole. Thus, for instance, if some persons are unequal in riches, they suppose them unequal in the whole; or, on the contrary, if they are equal in liberty, they suppose them equal in the whole. But they forget that which is the essential point; for if civil society was founded for the sake of preserving and increasing property, every one's right in the state would be in proportion to his fortune; and then the reasoning of those who insist upon an oligarchy would be valid; for it would not be right that he who contributed one mina should have an equal share in the hundred along with him who brought in all the rest, either of the original money or of what was afterwards acquired. Nor was civil society founded merely in order that its members might live, but that they might live well (for otherwise a state might be composed of slaves, or of the animal creation, which is far from the case, because these have no share in happiness, nor do they live after their own choice); nor is it an alliance mutually to defend each other from injuries, or for a commercial intercourse; for then the

Tyrrhenians and Carthaginians and all other nations between whom treaties of commerce subsist would be citizens of one state. For they have articles to regulate their imports, and engagements for mutual protection, and alliances for mutual defense; yet still they have not all the same magistrates established among them, but they are different among different people; nor does the one take any care that the morals of the other should be as they ought, or that none of those who have entered into the common agreements should be unjust, or in any degree vicious, but only that they shall not injure another confederate. But whosoever endeavors to establish wholesome laws in a state attends to the virtues and the vices of each individual who composes it; and hence it is evident that the first care of a man who would found a state truly deserving that name, and not nominally so, must be to have his citizens virtuous, for otherwise it is merely an alliance for self-defense, differing only in place from those which are made between different people. For the law is an agreement, and as the sophist Lycophron says, a pledge between the citizens of their intending to do justice to each other, though not sufficient to make all the citizens just and good. And it is evident that this is the fact; for could any one bring different places together, as, for instance, Megara and Corinth, within the same walls, yet they would not be one state, not even if their inhabitants intermarried with each other, though this intercommunity contributes much to combine people into one state. Besides, could we suppose a set of people living separate from each other, but within such a distance as would admit of an intercourse, and that there were laws subsisting between each party to prevent their injuring one another in their mutual dealings (one being a carpenter, another a husbandman, another a shoemaker, and the like), and that their numbers were ten thousand, and still that they had nothing in common but a tariff for trade, or an alliance for mutual defense, even so they would not constitute a state. And why in the world? Not because their mutual intercourse is not near enough; for even if persons so situated should come to one place, and every one should live in his own house as in his native city, and there should be alliances subsisting between

each party, mutually to assist and prevent any injury being done to the other, still they would not be admitted to be a city by those who reason correctly, if they preserved the same customs when they were together as when they were separate. It is evident, then, that a state is not a mere community of place, nor established for the sake of mutual safety or traffic, but that these things are the necessary consequences of a state, although they may all exist where there is no state; but a state is a society of people joining together with their families, and their children, to live well, for the sake of a perfect and independent life; and for this purpose it is necessary that they should live in one place, and intermarry with each other. Hence in all cities there are family meetings, clubs, sacrifices, and public entertainments, to promote friendship; for a love of sociability is friendship itself; so that the end for which a state is established is that the inhabitants of it may live happily; and these things are conducive to that end, for it is a community of families and villages, formed for the sake of a perfect independent life, — that is, as we have already said, for the sake of living well and happily. The political state, therefore, is founded not for the purpose of men's merely living together but for their living as men ought; for which reason those who contribute most to this end deserve to have greater power in the state than either those who are their equals in family and freedom but their inferiors in civil virtue, or those who excel them in wealth but are below them in worth. It is evident from what has been said that in all disputes upon forms of government each party says something that is just.

There may also be a doubt as to who should possess the supreme power of the state. Shall it be the majority, or the wealthy, or a number of proper persons, or one better than the rest, or a tyrant? But whichever of these we prefer, some difficulty will arise. For what? If the poor, because they are the majority, may divide among themselves what belongs to the rich, is not this unjust? In sooth, by heaven, it will have been judged just enough by the multitude when they gain the supreme power. What therefore is the extremity of injustice, if this is not? Again, if the many seize into their own hands everything which belongs

to the few, it is evident that the state will be at an end. But virtue never tends to destroy what is itself virtuous, nor can what is right be the ruin of the state. Therefore such a law can never be right; nor can the acts of a tyrant ever be wrong, for of necessity they must all be just; for, from his unlimited power, he compels every one to obey his command, as the multitude oppress the rich. Is it right, then, that the rich and few should have the supreme power? And what if they be guilty of the same rapine, and plunder the possessions of the majority, will this be just? It will be the same as in the other case; but it is evident that all things of this sort are wrong and unjust. Well, then, suppose that those of the better sort shall have the supreme power, must not then all the other citizens live unhonored, without sharing the offices of the state? For the offices of a state we call honors, and if one set of men are always in power, it is evident that the rest must be without honors. Then will it be better that the supreme power be in the hands of that one person who is fittest for it? But by this means the power will be more confined, for a greater number than before will continue unhonored. But some one may say that, in short, it is wrong that man should have the supreme power rather than the law, as his soul is subject to so many passions. But if this law appoints an aristocracy, or a democracy, how will it help us in our present doubts? For those things will happen which we have already mentioned.

Of other particulars, then, let us treat hereafter; but as to the fact that the supreme power ought to be lodged with the many rather than with those of the better sort, who are few, there would seem to be some doubt, though also some truth as well. Now, though each individual of the many may himself be unfit for the supreme power, yet when these many are joined together, it is possible that they may be better qualified for it than the others; and this not separately, but as a collective body. So the public suppers exceed those which are given at one person's private expense; for, as they are many, each person brings in his share of virtue and wisdom; and thus, coming together, they are like one man made up of a multitude, with many feet,

many hands, and many senses. Thus is it with respect to the character and understanding. And for this reason the many are the best judges of music and poetry, for some understand one part, some another, and all collectively the whole. And in this particular men of consequence differ from each of the many, as they say those who are beautiful differ from those who are not so, and as fine pictures excel any natural objects by collecting into one the several beautiful parts which were dispersed among different originals, although the separate parts of individuals, as the eye or any other part, may be handsomer than in the picture. But it is not clear whether it is possible that this distinction should exist between every people and general assembly, on the one hand, and some few men of consequence, on the other; but, by heaven, doubtless it is clear enough that, with respect to a few, it is impossible, since the same conclusion might be applied even to brutes; and indeed, so to say, wherein do some men differ from brutes? But nothing prevents what I have said being true of the people in some states. The doubt, then, which we have lately proposed, with that which is its consequence, may be settled in this manner; it is necessary that the freemen and the bulk of the people should have absolute power in some things; but these are such as are not men of property, nor have they any reputation for virtue. And so it is not safe to trust them with the first offices in the state, both on account of their injustice and their ignorance; from the one of which they are likely to do what is wrong, from the other to make mistakes. And yet it is dangerous to allow them no power or share in the government; for when there are many poor people who are excluded from office, the state must necessarily have very many enemies in it. It remains, then, that they should have a place in the public assemblies, and in determining causes. And for this reason Socrates and some other legislators give them the power of electing the officers of the state, and also of inquiring into their conduct after their term of office, but do not allow them to act as magistrates by themselves. For the multitude, when they are collected together, have all of them sufficient understanding for these purposes, and by mixing among those of higher rank are serviceable

to the state ; as some things which alone are improper for food, when mixed with others make the whole more wholesome than a few of them would be ; though each individual is unfit to form a judgment by himself. But there is a difficulty attending this form of government, for it seems that the same person, who himself was capable of curing any one who was then sick, must be the best judge whom to employ as a physician ; but such a one must be himself a physician. And the same holds true in every other practice and art ; and as a physician ought to give an account of his practice to physicians, so ought it to be in other arts. But physicians are of three sorts : the first makes up the medicines, the second prescribes, the third understands the science but never practices it. Now these three distinctions may be found in those who understand all other arts ; and we have no less opinion of their judgment who are only instructed in the principles of the art than of those who practice it. And with respect to elections the same would seem to hold true, for to elect a proper person in any line is the business of those who are skilled in it ; as in geometry, it is the part of geometricians, and of steersmen in the art of steering. But even if some individuals do know something of particular arts and works, they do not know more than the professors of them, so that, even upon this principle, neither the election of magistrates nor the censure of their conduct should be intrusted to the many. But possibly much that has been here said may not be right, for, to resume the argument lately used, if the people are not very brutal indeed, although we allow that each individual knows less of these affairs than those who have given particular attention to them, yet when they come together they will know them better, or at least not worse ; besides, in some particular arts it is not the workman only who is the best judge, as in those the works of which are understood by those who do not profess them. Thus he who builds a house is not the only judge of it (for the master of the family who inhabits it is a better one) ; thus also a steersman is a better judge of a tiller than he who made it, and he who gives an entertainment than the cook. What has been said seems a sufficient solution of this difficulty ; but there

is another that follows, for it seems absurd that greater power in the state should be lodged with the bad than with the good. Now the power of election and censure is of the very utmost consequence, and this, as has been said, in some states they intrust to the people, for the general assembly is the supreme court of all. And yet they have a voice in this court, and deliberate on all public affairs, and try all causes, without any objection to the meanness of their circumstances, and at any age; but their questors, generals, and other great officers of state are taken from men of high condition. This difficulty, then, may be solved upon the same principle; and here, too, they may be right. For the power is not in the man who is a member of the assembly or council, but in the assembly itself, and in the council and people, of which each individual of the whole community forms a part, as senator, adviser, or judge. And for this reason it is very right that the many should have the greatest powers in their own hands; for the people, the council, and the judges are composed of them, and the property of all these collectively is more than the property of any person, or of a few who fill the great offices of the state, and thus let us determine these points.

But the first question that we stated shows nothing besides so plainly as that the supreme power should be lodged in laws duly made, and that the magistrate, or magistrates (either one or more), should be authorized to determine those cases on which the laws cannot define particularly, as it is impossible for them, in general language, to explain themselves upon everything that may arise. But what these laws are, which are established upon the best foundations, has not been yet explained, but still remains a matter of some question; but the laws of every state will necessarily be like the state itself, either trifling or excellent, just or unjust; for it is evident that the laws which are framed must correspond to the constitution of the government, and, if so, it is plain that a well-formed government will have good laws; a bad one, bad ones.

It now remains that we examine into a free state, and also those other forms of government, — an oligarchy, a democracy,

and a tyrant. And it is evident which of these three excesses must be the worst of all, and which next to it; for, of course, the excesses of the best and most divine must be the worst, for it must necessarily happen either that the monarchy will have only the name of king remaining without a reality, or else that it will remain owing to the great excess of power on the part of the king; whence a tyranny will arise, the worst excess imaginable, as being a government the most contrary to a free state. The excess next most hurtful is an oligarchy; for an aristocracy differs much from this sort of government; and that which is least hurtful is a democracy. This subject has been already treated by one of those writers who have gone before me, though his views do not look the same way as mine, for he thought that a democracy was the worst of all excellent constitutions, as compared with a good oligarchy or the like, but the best of all bad ones. Now I affirm that all these states without exception have fallen into excess, and also it is not well to say that one oligarchy is better than another, but that it is not quite so bad. But let us defer this question for the present. We must first inquire how many different sorts of free states there are, since there are many species of democracies and oligarchies, and which of them is the most comprehensive and most desirable as being the best form of government; or if there is any other, aristocratic in its principles, and well established; and also which of these is best adapted to most cities, and which of them is preferable for particular persons (for probably some may suit better with a violent oligarchy than with a democracy, and others better with the latter than the former); and afterwards in what manner a man ought to proceed who desires to establish either of these states, I mean the several species of democracy and of oligarchy. And, to conclude, when we shall have briefly made mention of everything that is necessary we must endeavor to point out the sources of corruption and of stability in governments, as well those which are common to all as those which are peculiar to each state, and from what causes they chiefly are wont to arise.

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We have now nearly gone through all those particulars of which we proposed to speak ; it remains that we next consider from what causes, and how many, and of what kinds, a change arises in governments, and what tends to the destruction of each state ; as also from what form a polity is most likely to shift into another form, and what are the preservatives both of governments in general and of each state in particular, and what are the means of saving each form of government from corruption. And here we ought first to lay down this principle, that there are many governments, all of which approve of what is just and equal according to analogy, and yet fail of attaining to it, as we have already mentioned. Thus democracies have arisen from supposing that those who are equal in any one thing are so in every other circumstance ; as, because they are equal in liberty they think themselves equal in everything else ; and oligarchies, from supposing that those who are unequal in one thing are unequal in all, for they deem that when men are unequal in point of fortune there can be no equality between them. Hence it follows that those who in some respects are equal with others endeavor to secure an equality with them in everything ; and those who are superior to others endeavor to get still more ; and it is this *more* which keeps the inequality. Thus, though most states have some notion of what is just, yet they are almost totally wrong, and upon this account, when either party has not that share in the administration which answers to its expectations it becomes seditious. But those who of all others have the greatest right so to act are least disposed to do it, namely, those who excel in virtue ; for it is most reasonable that they alone should be generally superior to the rest. There are, too, some persons of distinguished families who, on account of that point of superiority, disdain to be on an equality with others ; for those esteem themselves noble who can boast of their ancestors' merit and fortune, and these, to speak the truth, are the source and fountain head from whence seditions arise. Accordingly changes of government take place in two distinct ways : at one time they raise seditions for the purpose of changing the state already established to some other form, as when they propose to erect

an oligarchy instead of a democracy, or a democracy or free state in place of an oligarchy, or an aristocracy in place of these, or one of the latter instead of an aristocracy; and at another time, without reference to the established government, which they wish to be still the same, though they choose to have the sole management of it themselves, either in the hands of a few or of one only. They will also raise commotions concerning the degree of power to be established, as, for instance, if the government is an oligarchy, and in the same manner if it is a democracy, to have it more purely so, or else to have it less so; and, in like manner, in the case of the other forms of government, changes arise either to extend or contract their powers, or else to make some alterations in some parts of it, as to establish or abolish a particular magistracy, as some persons say Lysander endeavored to abolish the kingly power in Sparta, and King Pausanias that of the ephors. Thus in Epidamnus there was an alteration in one part of the constitution, for instead of the phylarchs they established a senate. It is also still necessary for all the magistrates at Athens to attend in the court of *heliæa* when any new magistrate is created; the power of the one archon, also, in that state partook of the nature of an oligarchy. Inequality is always the occasion of sedition, but among those who are not equal an unequal treatment is not unfair. Thus kingly power is unequal when it is exercised over equals. Upon the whole it is this aiming after an equality which is the cause of seditions. But equality is twofold, for it is either in number or in desert. Equality in number is when two things contain the same parts or the same quantity; but equality in value is attained by proportion, as three exceeds two and two exceeds one by the same number; but by proportion four exceeds two and two one in the same degree, for two is the same part of four as one is of two, that is to say, they are halves. Now all agree as to what is absolutely and simply just, but, as we have already said, they dispute concerning proportionate value; for some persons, if they are equal in one respect, think themselves equal in all; others, if they are superior in one thing, think they may claim the superiority in all. Hence chiefly there arise two sorts of governments,—

democracy and oligarchy; for nobility and merit are to be found only among a few; but their contraries, among the many, as there is not one man of nobility and merit in a hundred, but many without either are everywhere. But to establish a government entirely upon either of these equalities is wrong, as is made clear by the example of those so established, for none of them has been stable. And the reason of this is, that it is impossible that whatever is wrong at the first and in principle should not at last come to a bad result; and therefore in some things an equality of numbers ought to take place, in others an equality in value. However, a democracy is safer and less liable to sedition than an oligarchy, for in this latter it may arise from two causes, the few in power conspiring either against each other or against the people; but in a democracy men conspire only against the few who aim at exclusive power, but there is no instance worth speaking of where the people have raised a sedition against themselves. Moreover, a government composed of men of moderate fortunes comes much nearer to a democracy than to an oligarchy, and is the safest of all such states.

XXXIV

THE PRINCE¹

OF PRINCIPALITIES ACQUIRED BY ONE'S OWN PROPER CONDUCT AND ARMS

Let no man think it strange if in speaking of new governments, either by princes or states, I introduce great and eminent examples ; forasmuch as men in their actions follow commonly the ways that are beaten, and when they would do any generous thing they propose to themselves some pattern of that nature, nevertheless, being impossible to come up exactly to that, or to acquire that virtue in perfection which you desire to imitate, a wise man ought always to set before him for his example the actions of great men who have excelled in the achievement of some great exploit, to the end that though his virtue and power arrives not at that perfection, it may at least come as near as possible, and receive some tincture thereby, like experienced archers who, observing the mark to be at great distance, and knowing the strength of their bow, and how far it will carry, fix their aim somewhat higher than the mark, not with design to shoot at that height, but that by mounting their arrow to a certain proportion, they may come the nearer to the mark they intend. I say, then, that principalities newly acquired by an upstart prince are more or less difficult to maintain, as he is more or less provident that gains them. And because the happiness of rising from a private person to be a prince presupposes great virtue, or fortune, where both of them concur they do much facilitate the conservation of the conquest ; yet he who has committed least to fortune has continued the longest. It prevents much trouble likewise when the prince (having no better

¹ From *The Prince*, by Nicholas Machiavelli, chaps. vi, vii, viii, ix. Translated by Henry Neville, London, 1675.

residence elsewhere) is constrained to live personally among them. But to speak of such who by their virtue rather than fortune have advanced themselves to that dignity, I say that the most renowned and excellent are Moses, Cyrus, Romulus, Theseus, and the like ; and though Moses might be reasonably excepted, as being only the executioner of God's immediate commands, yet he deserves to be mentioned, if it were only for that grace which rendered him capable of communication with God. But if we consider Cyrus and the rest of the conquerors and founders of monarchies, we shall find them extraordinary ; and examining their lives and exploits, they will appear not much different from Moses, who had so incomparable a master ; for by their conversations and successes they do not seem to have received anything from fortune but occasion and opportunity of introducing what forms of government they pleased ; and as without that occasion the greatness of their courage had never been known, so had not they been magnanimous and taken hold of it, that occasion had happened in vain. It was necessary, therefore, for Moses, that the people of Israel should be in captivity in Egypt, that to free themselves from bondage they might be disposed to follow him ; it was not inconvenient that Romulus should be turned out of Alba and exposed to the wild beasts when he was young, that he might afterwards be made king of Rome and founder of that great empire. It was not unnecessary likewise that Cyrus should find the Persians mutinying at the tyranny of the Medes, and that the Medes should be grown soft and effeminate with their long peace. Theseus could never have given proof of his virtue and generosity had not the Athenians been in great trouble and confusion. These great advantages made those great persons eminent, and their great wisdom knew how to improve them to the reputation and enlargement of their country. They then who become great by the ways of virtue (as the princes above said) do meet with many difficulties before they arrive at their ends, but having compassed them once they easily keep them : the difficulties in the acquisition arise in part from new laws and customs which they are forced to introduce for the establishment and security of their own dominion ; and

this is to be considered, that there is nothing more difficult to undertake, more uncertain to succeed, and more dangerous to manage than to make one's self prince and prescribe new laws, because he who innovates in that manner has for his enemies all those who made any advantage by the old laws ; and those who expect benefit by the new will be but cool and lukewarm in his defense, which lukewarmness proceeds from a certain awe for their adversaries who have their old laws on their side, and partly from a natural incredulity in mankind, which gives credit but slowly to any new thing, unless recommended first by the experiment of success. Hence it proceeds that the first time the adversary has opportunity to make an attempt, he does it with great briskness and vigor, but the defense is so tepid and faint that for the most part the new prince and his adherents perish together. Wherefore for better discussion of this case it is necessary to inquire whether these innovators do stand upon their own feet or depend upon other people, — that is to say, whether in the conduct of their affairs they do make more use of their rhetoric than their arms. In the first case they commonly miscarry, and their designs seldom succeed ; but when their expectations are only from themselves, and they have power in their own hands to make themselves obeyed, they run little or no hazard, and do frequently prevail. For further evicition, the Scripture shows us that those of the prophets whose arms were in their hands, and had power to compel, succeeded better in the reformatiions which they designed ; whereas those who came only with exhortation and good language suffered martyrdom and banishment, because (besides the reasons above said) the people are unconstant and susceptible of any new doctrine at first, but not easily brought to retain it ; so that things are to be ordered in such manner that when their faith begins to stagger they may be forced to persist. Moses, Cyrus, Theseus, and Romulus could never have made their laws to have been long observed, had they not had power to have compelled it ; as in our days it happened to Friar Jerome Savonarola, who ruined himself by his new institutions, as soon as the people of Florence began to desert him, for he had no means to confirm them who had been of his

opinion, nor to constrain such as dissented. Wherefore such persons meet with great difficulty in their affairs; all their dangers are still by the way, which they can hardly overcome but by some extraordinary virtue and excellence; nevertheless, when once they have surmounted them and arrived at any degree of veneration, having supplanted those who envied their advancement, they remain puissant, and firm, and honorable, and happy. I will add to these great examples another, perhaps not so conspicuous, but one that will bear a proportion and resemblance with the rest, and shall satisfy me for all others of that nature. It is of Hiero of Syracuse, who from a private person was made prince of that city, for which he was beholding to fortune no further than for the occasion, because the Syracusans, being under oppression, chose him for their captain, in which command he behaved himself so well that he deserved to be made their prince, for he was a person of so great virtue and excellence that those who have writ of him have given him this character, that even in his private condition he wanted nothing but a kingdom to make him an admirable king. This Hiero subdued the old militia, established a new, renounced the old allies, confederated with others, and having friends and forces of his own, he was able upon such a foundation to erect what fabric he pleased, so that though the acquisition cost him much trouble, he maintained it with little.

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OF NEW PRINCIPALITIES ACQUIRED BY ACCIDENT AND THE SUPPLIES OF OTHER PEOPLE

They who from private condition ascend to be princes, and merely by the indulgence of fortune arrive without much trouble at their dignity, though it costs them dear to maintain it, meet but little difficulty in their passage, being hurried, as it were, with wings, yet when they come to settle and establish, then begins their misery. These kinds of persons are such as attain their dignity by bribes, or concession of some other great prince, as it happened to several in Greece, in the cities of Ionia, and upon

the Hellespont, where they were invested with that power by Darius for his greater security and glory, and to those emperors who arrived at the empire by the corruption of the soldiers. Such a person, I say, subsists wholly upon the pleasure and fortune of those who advanced him, which being two things very valuable and uncertain, he has neither knowledge nor power to continue long in that degree; he has not the knowledge, because unless he be a man of extraordinary qualities and virtue, it is not reasonable to think he who before lived always in a private condition himself can know how to command other people; he has not the power, because he has no forces upon whose friendship and fidelity he can rely. Moreover, states which are suddenly conquered (as all things else in nature whose rise and increase is so speedy) can have no root or foundation but what will be shaken and supplanted by the first gust of adversity, unless they who have been so suddenly exalted be so wise as to prepare prudently in time for the conservation of what fortune threw so luckily into their lap, and establish afterwards such fundamentals for their duration as others (which I mentioned before) have done in the like cases. About the arrival at this authority, either by virtue or good fortune, I shall instance in two examples that are fresh in our memory: one is Francesco Sforza, the other Cesare Borgia. Sforza by just means and extraordinary virtue made himself duke of Milan, and enjoyed it in great peace, though gained with much trouble. Borgia, on the other side (called commonly Duke Valentine), got several fair territories by the fortune of his father, Pope Alexander, and lost them all after his death, though he used all his industry and employed all the arts which a wise and brave prince ought to do to fix himself in the sphere where the arms and fortune of other people had placed him; for he (as I said before) who laid not his foundation in time may yet raise his superstructure, but with great trouble to the architect and great danger to the building. If therefore the whole progress of the said duke be considered, it will be found what solid foundations he had laid for his future dominion, of which progress I think it not superfluous to discourse, because I know not what better precepts to display before a new prince than the example

of his actions, and though his own orders and methods did him no good, it was not so much his fault as the malignity of his fortune.

Pope Alexander the Sixth had a desire to make his son, Duke Valentine, great, but he saw many blocks and impediments in the way, both for the present and future. First, he could not see any way to advance him to any territory that depended not upon the church, and to those in his gift he was sure the duke of Milan and the Venetians would never consent, for Faenza and Rimini had already put themselves under the Venetian protection. He was likewise sensible that the forces of Italy, especially those who were capable of assisting him, were in the hands of those who ought to apprehend the greatness of the pope, as the Orsini, Colonnese, and their followers, and therefore could not repose any great confidence in them ; besides, the laws and alliances of all the states in Italy must of necessity be disturbed before he could make himself master of any part, which was no hard matter to do, finding the Venetians, upon some private interest of their own, inviting the French to another expedition into Italy, which his Holiness was so far from opposing that he promoted it by the dissolution of King Louis his former marriage. Louis therefore passed the Alps by the assistance of the Venetians and Alexander's consent, and was no sooner in Milan but he sent forces to assist the pope in his enterprise against Romagna, which was immediately surrendered upon the king's reputation. Romagna being in this manner reduced by the duke, and the Colonnese defeated, being ambitious not only to keep what he had got but to advance in his conquests, two things obstructed : one was the infidelity of his own army, the other the aversion of the French : for he was jealous of the forces of the Orsini who were in his service ; suspected they would fail him in his need, and either hinder his conquest or take it from him when he had done, and the same fears he had of the French ; and his jealousy of the Orsini was much increased, when after the expugnation of Faenza, assaulting Bologna, he found them very cold and backward in the attack ; and the king's inclination he discovered when, having possessed himself of the duchy of Urbin, he invaded Tuscany and

was by him required to desist. Whereupon the duke resolved to depend no longer upon fortune and foreign assistance, and the first course he took was to weaken the party of the Orsini and Colonna in Rome, which he effected very neatly by debauching such of their adherents as were gentlemen, taking them into his own service and giving them honorable pensions and governments and commands according to their respective qualities, so that in a few months their passion for that faction evaporated and they turned all for the duke. After this he attended an opportunity of supplanting the Orsini, as he had done the family of the Colonna before, which happened very luckily and was as luckily improved. For the Orsini, considering too late that the greatness of the duke and the church tended to their ruin, held a council at a place called Magione, in Perugia, which occasioned the rebellion of Urbino, the tumults of Romagna, and a thousand dangers to the duke besides ; but though he overcame them all by the assistance of the French, and recovered his reputation, yet he grew weary of his foreign allies, as having nothing further to oblige them, and betook himself to his artifice, which he managed so dexterously that the Orsini reconciled themselves to him by the mediation of Signior Paulo, with whom for his security he comported so handsomely by presenting with money, rich stuffs, and horses, that being convinced of his integrity, he conducted them to Sinigaglia, and delivered them into the duke's hands. Having by this means exterminated the chief of his adversaries and reduced their friends, the duke had laid a fair foundation for his greatness, having gained Romagna and the duchy of Urbino and insinuated with the people by giving them a gust of their future felicity. And because this part is not unworthy to be known, for imitation's sake I will not pass it in silence. When the duke had possessed himself of Romagna, finding it had been governed by poor and inferior lords, who had rather robbed than corrected their subjects, and given them more occasion of discord than unity, inasmuch as that province was full of robberies, riots, and all manner of insolencies, to reduce them to unanimity and subjection to monarchy, he thought it necessary to provide them a good governor, and thereupon he conferred that charge upon

Reniro d'Orco, with absolute power, though he was a cruel and a passionate man. Orco was not long before he had settled it in peace, with no small reputation to himself. Afterwards the duke, apprehending that so large a power might grow odious to the people, erected a court of judicature in the middle of the province, in which every city had its advocate, and an excellent person was appointed to preside. And because he discovered that his past severity had created him many enemies, to remove that ill opinion and recover the affections of the people, he had a mind to show that if any cruelty had been exercised it proceeded not from him but from the arrogance of his minister; and for their further confirmation he caused the said governor to be apprehended and his head chopped off one morning in the market place at Cesena, with a wooden dagger on one side of him and a bloody knife on the other, the ferocity of which spectacle not only appeased but amazed the people for a while. But reassuming our discourse, I say the duke, finding himself powerful enough, and secure against present danger, being himself as strong as he desired, and his neighbors in a manner reduced to an incapacity of hurting him, being willing to go on with his conquests, there remained nothing but a jealousy of France, and not without cause, for he knew that king had found his error at last, and would be sure to obstruct him. Hereupon he began to look abroad for new allies, and to hesitate and stagger towards France, as appeared when the French army advanced into the kingdom of Naples against the Spaniards who had besieged Cajeta; his great design was to secure himself against the French, and he had doubtless done it if Alexander had lived. These were his provisions against the dangers that were imminent, but those that were remote were more doubtful and uncertain. The first thing he feared was lest the next pope should be his enemy and reassume all that Alexander had given him; to prevent which he proposed four several ways: the first was by destroying the whole line of those lords whom he had dispossessed, that his Holiness might have no occasion to restore them; the second was to cajole the nobility in Rome, and draw them over to his party, that thereby he might put an

awe and restraint upon the pope ; the third was, if possible, to make the college his friends ; the fourth was to make himself so strong before the death of his father as to be able to stand upon his own legs, and repel the first violence that should be practiced against him. Three of these four expedients he had tried before Alexander died, and was in a fair way for the fourth ; all the disseized lords which came into his clutches he put to death, and left few of them remaining ; he had insinuated with the nobility of Rome, and got a great party in the college of cardinals, and as to his own corroboration, he had designed to make himself master of Tuscany, had got possession of Perugia and Piombino already, and taken Pisa into his protection ; and having now no further regard for the French (who were beaten out of the kingdom of Naples by the Spaniard, and both of them reduced to a necessity of seeking his amity), he leaped bluntly into Pisa, after which Lucca and Siena submitted without much trouble, partly in hatred to the Florentines, and partly for fear ; and the Florentines were grown desperate and without any hopes of relief, so that had these things happened before, as they did the same year in which Alexander died, doubtless he had gained so much strength and reputation that he would have stood firm by himself, upon the basis of his own power and conduct, without depending upon fortune or any foreign supplies. But his father died five years after his son had taken up arms, and left him nothing solid and in certainty but Romagna only ; the rest were *in nubibus*, infested with two formidable armies, and himself mortally sick. This duke was a man of that magnanimity and prudence, and understood so well which way men were to be wheedled, or destroyed, and such were the foundations that he had laid in a short time, that had he not had those two great armies upon his back, and a fierce distemper upon his body, he had overcome all difficulties and brought his designs to perfection. That the foundations which he had laid were plausible appeared by the patience of his subjects in Romagna, who held out for him a complete month, though they knew he was at death's door, and unlikely ever to come out of Rome : to which place, though the Baglioni, the

Vitelli, and Orsini returned, seeing there was no likelihood of his recovery, yet they could not gain any of his party, nor debauch them to their side; 't is possible he was not able to put whom he pleased into the pontifical chair, yet he had power enough to keep any man out who he thought was his enemy; but had it been his fortune to have been well when his father Alexander died, all things had succeeded to his mind. He told me himself about the time that Julius XI was created, that he had considered well the accidents that might befall him upon the death of his father, and provided against them all, only he did not imagine that at his death he should be so near it himself. Upon serious examination, therefore, of the whole conduct of Duke Valentine, I see nothing to be reprehended; it seems rather proper to me to propose him (as I have done) as an example for the imitation of all such as, by the favor of fortune or the supplies of other princes, have got into the saddle; for his mind being so large and his intentions so high, he could not do otherwise, and nothing could have opposed the greatness and wisdom of his designs but his own infirmity and the death of his father. He therefore who thinks it necessary in the minority of his dominion to secure himself against his enemies; to gain himself friends; to overcome, whether by force or by fraud; to make himself beloved or feared by his people; to be followed and revered by his soldiers; to destroy and exterminate such as would do him injury; to repeal and suppress old laws, and introduce new; to be severe, grateful, magnanimous, liberal; to cashier and disband such of his army as were unfaithful, and put new in their places; to manage himself so in his alliances with kings and princes that all of them should be either obliged to requite him, or afraid to offend him, — he, I say, cannot find a fresher or better model than the actions of this prince. If in anything he is to be condemned, it is in suffering the election of Julius XI, which was much to his prejudice, for though (as is said before) he might be unable to make the pope as he pleased, yet it was in his power to have put any one by, and he ought never to have consented to the election of any of the cardinals whom he had formerly offended, or who after their

promotion were likely to be jealous of him, for men are as mischievous for fear as for hatred. Those cardinals which he had disobliged were, among others, the cardinals of St. Peter ad Vincula, Colunno, St. George, and Ascanius. The rest, if any of them were advanced to the papacy, might well be afraid of him, except the Spanish cardinals and the cardinal of Roan: the Spaniards by reason of their obligations and alliance; and the other, by reason of his interest in the kingdom of France. Wherefore above all things the duke should have made a Spanish cardinal pope; and if that could not have been done, he should rather have consented to the election of Roan than St. Peter ad Vincula; for 't is weakness to believe that among great persons new obligations can obliterate old injuries and disgusts. So that in the election of this Julius XI, Duke Valentine committed an error that was the cause of his utter destruction.

OF SUCH AS HAVE ARRIVED AT THEIR DOMINION BY WICKED AND UNJUSTIFIABLE MEANS

Now because there are two ways for a private person to become a prince, which ways are not altogether to be attributed either to fortune or management, I think it not convenient to pretermitt them, though of one of them I may speak more largely, where occasion is offered to treat more particularly of republics. One of these ways is when one is advanced to the sovereignty by any illegal and nefarious means; the other, when a citizen by the favor and partiality of his fellow-citizens is made prince of his country. I shall speak of the first in this chapter, and justify what I say by two examples, one ancient, the other modern, without entering farther into the merits of the cause, as judging them sufficient for any man who is necessitated to follow them. Agathocles the Sicilian not only from a private but from a vile and abject condition was made king of Syracuse, and being but the son of a potter, he continued the dissoluteness of his life through all the degrees of his fortune; nevertheless his vices were accompanied with such courage and activity that he applied himself to the wars, by which, and his great industry, he came

at length to be pretor of Syracuse. Being settled in that dignity, and having concluded to make himself prince, and hold that by violence, without obligation to anybody, which was conferred upon him by consent, he settled an intelligence with Amilcar the Carthaginian, who was then at the head of an army in Sicily; and calling the people and senate of Syracuse together one morning, as if he were about to consult them in some matter of importance to the state, upon a signal appointed he caused his soldiers to kill all the senators and the most wealthy of the people; after whose death he usurped and possessed the dominion of that city, without any obstruction; and though afterwards he lost two great battles to the Carthaginians, and at length was besieged, yet he was not only able to defend that city, but leaving part of his forces for the security of that, with the rest he transported into Africa, and ordered things so that in a short time he relieved Syracuse and reduced the Carthaginians into such extreme necessity that they were glad to make peace with him and, contenting themselves with Africa, leave Sicily to Agathocles. He then who examines the exploits and conduct of Agathocles will find little or nothing that may be attributed to fortune, seeing he rose not (as is said before) by the favor of any man but by the steps and gradations of war; having gotten with a thousand difficulties and dangers that government which he maintained afterwards with as many noble achievements. Nevertheless it cannot be called virtue in him to kill his fellow-citizens, betray his friends, to be without faith, without pity or religion; these are ways that may get a man empire, but no glory nor reputation; yet if the wisdom of Agathocles be considered, his dexterity in encountering and overcoming of dangers, his courage in supporting and surmounting his misfortunes, I do not see why he should be held inferior to the best captains of his time. But his unbounded cruelty and barbarous inhumanity, added to a million of other vices, will not permit that he be numbered among the most excellent men. So then that which he performed cannot justly be attributed to either fortune or virtue, for he did all himself without either the one or the other. In our days under the papacy of Alexander VI, Oliverotto de Fermo, being left

young many years since by his parents, was brought up by his uncle by the mother's side, called John Togliani, and in his youth listed a soldier under Paulo Vitelli, that having improved himself by his discipline, he might be capable of some eminent command. Paulo being dead, he served under Vitellezzo, his brother, and in short time by the acuteness of his parts and the briskness of his courage became one of the best officers in his army. But thinking it beneath him to continue in any man's service, he conspired with some of his fellow-citizens of Fermo (to whom the servitude of their country was more agreeable than its liberty) by the help of Vitellezzo to seize upon Fermo; in order to which, he writ a letter to his uncle, John Togliani, importing, that having been absent many years, he had some thoughts of visiting him and Fermo, and taking some little diversion in the place where he was born, and because the design of his service had been only the gaining of honor, that his fellow-citizens might see his time had not been ill spent, he desired admission for a hundred horse of his friends, and his equipage, and begged of him that he would take care they might be honorably received, which would redound not only to his honor but his uncle's, who had had the bringing him up. John was not wanting in any office to his nephew, and having caused him to be nobly received, he lodged him in his own house, where he continued some days, preparing in the meantime what was necessary to the execution of his wicked design. He made a great entertainment, to which he invited John Togliani and all the chief citizens in the town. About the end of the treatment, when they were entertaining one another, as is usual at such times, Oliverotto very subtilly promoted certain grave discourses about the greatness of Pope Alexander and Cæsar, his son, and of their designs; John and the rest replying freely to what was said, Oliverotto smiled and told them those were points to be argued more privately, and thereupon removing into a chamber, his uncle and the rest of his fellow-citizens followed; they were scarce sat down before soldiers (who were concealed about the room) came forth, and killed all of them, and the uncle among the rest; after the murder was committed Oliverotto mounted

on horseback, rid about, and rummaged the whole town, having besieged the chief magistrate in his palace ; so that, for fear, all people submitted, and he established a government of which he made himself head. Having put such to death as were discontented and in any capacity of doing him hurt, he fortified himself with new laws, both military and civil, insomuch as in a year's time he had not only fixed himself in Fermo but was become terrible to all that were about him ; and he would have been as hard as Agathocles to be supplanted, had he not suffered himself to be circumvented by Cesare Borgia, when at Sinigaglia (as aforesaid) he took the Orsini and Vitelli ; where also he himself was taken a year after his parricide was committed, and strangled with his master Vitellezzo, from whom he had learned all his good qualities, and evil.

It may seem wonderful to some people how it should come to pass that Agathocles, and such as he, after so many treacheries and acts of inhumanity, should live quietly in their own country so long, defend themselves so well against foreign enemies, and none of their subjects conspire against them at home, seeing several others by reason of their cruelty have not been able, even in times of peace as well as war, to defend their government. I conceive it fell out according as their cruelty was well or ill applied ; I say well applied (if that word may be added to an ill action), and it may be called so when committed but once and that of necessity for one's own preservation, but never repeated afterwards, and even then converted as much as possible to the benefit of the subject. Ill applied are such cruelties as are but few in the beginning, but in time do rather multiply than decrease. Those who are guilty of the first do receive assistance sometimes both from God and man, and Agathocles is an instance. But the others cannot possibly subsist long : from whence it is to be observed that he who usurps the government of any state is to execute and put in practice all the cruelties which he thinks material at once, that he may have no occasion to renew them often, but that by his discontinuance he may mollify the people and by his benefits bring them over to his side ; he who does otherwise, whether for fear or ill counsel, is obliged to be always

ready with his knife in his hand, for he can never repose any confidence in his subjects, whilst they, by reason of his fresh and continued inhumanities, cannot be secure against him ; so then injuries are to be committed all at once, that the last being the less, the distaste may be likewise the less ; but benefits should be distilled by drops, that the relish may be the greater. Above all, a prince is to so behave himself towards his subjects that neither good fortune or bad should be able to alter him, for being once assaulted with adversity you have no time to do mischief, and the good which you do does you no good, being looked upon as forced, and so no thanks to be due for it.

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OF CIVIL PRINCIPALITY

I shall speak now of the other way, when a principal citizen, not by wicked contrivance or intolerable violence, is made sovereign of his country, which may be called a civil principality, and is not to be attained by either virtue or fortune alone but by a lucky sort of craft ; this man, I say, arrives at the government by the favor of the people or nobility ; for in all cities the meaner and the better sort of citizens are of different humors, and it proceeds from hence that the common people are not willing to be commanded and oppressed by the great ones, and the great ones are not to be satisfied without it ; from this diversity of appetite one of these three effects do arise, — principality, liberty, or licentiousness. Principality is caused either by the people or the great ones, as either the one or the other has occasion : the great ones, finding themselves unable to resist the popular torrent, do many times unanimously confer their whole authority upon one person, and create him prince, that under his protection they may be quiet and secure. The people, on the other side, when overpowered by their adversaries, do the same thing, transmitting their power to a single person, who is made king for their better defense. He who arrives at the sovereignty by the assistance of the great ones preserves it with more difficulty than he who is advanced by the people, because he has about

him many of his old associates, who, thinking themselves his equals, are not to be directed and managed as he would have them. But he that is preferred by the people stands alone without equals, and has nobody, or very few about him, but what are ready to obey: moreover, the grandees are hardly to be satisfied without injury to others, which is otherwise with the people, because their designs are more reasonable than the designs of the great ones which are fixed upon commanding and oppressing altogether, whilst the people endeavor only to defend and secure themselves. Moreover, where the people is adverse, the prince can never be safe, by reason of their numbers; whereas the great ones are but few, and by consequence not so dangerous. The worst that a prince can expect from an injured and incensed people is to be deserted, but if the great ones be provoked, he is not only to fear abandoning but conspiracy, and bandying against him; for the greater sort being more provident and cunning, they look out in time to their own safety, and make their interest with the person who they hope will overcome. Besides, the prince is obliged to live always with one and the same people, but with the grandees he is under no such obligation, for he may create and degrade, advance and remove them as he pleases. But for the better explication of this part, I say that these great men are to be considered two ways especially; that is, whether in the manner of their administration they do wholly follow the fortune and interest of the prince, or whether they do otherwise. Those who devote themselves entirely to his business, and are not rapacious, are to be valued and preferred. Those who are more remiss, and will not stick to their prince, do it commonly upon two motives, either out of laziness or fear (and in those cases they may be employed, especially if they be wise and of good counsel, because if affairs prosper, thou gainest honor thereby; if they miscarry, thou needest not to fear them) or upon ambition and design, and that is a token that their thoughts are more intent upon their own advantage than thine. Of these a prince ought always to have a more than ordinary care, and order them as if they were enemies professed, for in his distress they will be sure to set

him forwards, and do what they can to destroy him. He therefore who comes to be prince by the favor and suffrage of the people is obliged to keep them his friends, which (their desire being nothing but freedom from oppression) may be easily done. But he that is preferred by the interest of the nobles against the minds of the commons is, above all things, to endeavor to ingratiate with the people, which will be as the other, if he undertakes their protection; and men receiving good offices, where they expected ill, are endeared by the surprise, and become better affected to their benefactor than perhaps they would have been had he been made prince by their immediate favor. There are many ways of insinuating with the people, of which no certain rule can be given, because they vary according to the diversity of the subject, and therefore I shall pass them at this time, concluding with this assertion, that it is necessary, above all things, that a prince preserve the affections of his people, otherwise in any exigence he has no refuge nor remedy. Nabides, prince of the Spartans, sustained all Greece, and a victorious army of the Romans, and defended his government and country against them all; and to do that great action it was sufficient for him to secure himself against the machinations of a few, whereas if the people had been his enemy, that would not have done it. Let no man impugn my opinion with that old saying, *He that builds upon the people builds upon the sand*. That is true, indeed, when a citizen of private condition relies upon the people, and persuades himself that when the magistrate, or his adversary, goes about to oppress him they will bring him off, in which case many precedents may be produced, and particularly the Gracchi in Rome, and Georgio Scali in Florence. But if the prince that builds upon them knows how to command, and be a man of courage, not dejected in adversity nor deficient in his other preparations, but keeps up the spirits of his people by his own valor and conduct, he shall never be deserted by them, nor find his foundation laid in a wrong place.

These kinds of governments are most tottering and uncertain when the prince strains of a sudden, and passes (as at one leap) from a civil to an absolute power, and the reason is because they

either command and act by themselves, or by the ministry and mediation of the magistrate. In this last case their authority is weaker and more ticklish, because it depends much upon the pleasure and concurrence of the chief officers, who (in time of adversity especially) can remove them easily, either by neglecting or resisting their commands. Nor is there any way for such a prince in the perplexity of his affairs to establish a tyranny, because those citizens and subjects who used to exercise the magistracy retain still such power and influence upon the people that they will not infringe their laws to obey his; and in time of danger he shall always want such as he can trust. So that a prince is not to take his measures according to what he sees in times of peace, when of the subjects (having nothing to do but to be governed) every one runs, every one promises, and every one dies for him, when death is at a distance; but when times are tempestuous, and the ship of the state has need of the help and assistance of the subject, there are but few will expose themselves; and this experiment is the more dangerous because it can be practiced but once; so then a prince who is provident and wise ought to carry himself so that in all places, times, and occasions the people may have need of his administration and regiment, and ever after they shall be faithful and true.

XXXV

THE BOSS¹

OF THE DIFFERENCE BETWEEN A PRINCE AND AN ELECTED RULER

An hereditary prince differs altogether in outward appearance and conduct from the chosen ruler of a municipality; for a prince is looked upon by some of his subjects as ruling by the grace of God, and as being by nature higher than other men, and by most of the rest as ruling by a prescriptive title which it is more mischievous to dispute than to accept. Therefore it is true, as Blackstone says, that the law ascribes to the prince not only large powers and emoluments but likewise certain attributes of a great and transcendent nature, by which the people are led to consider him in the light of a superior being, and to pay him that awful respect which may enable him with greater ease to carry on the business of government.

Hence a prince may do many things, both evil and good, that other men may not. Thus it is expected of him that he shall be magnificent in his display of wealth, and he may therefore exact more from his subjects if he is lavish than if he is penurious; for they think his splendor is in some way their own, and take pride in it. And if no extraordinary vices render him odious, as Machiavelli says, he may indulge his desires as he will, and yet engross the inclination and regard of his subjects. Thus in France, Louis XIV caused the greatest misery to his people by his extravagance and aggressive wars, yet he was not only tolerated but admired by them for the glory he brought to the nation; and Henry IV, who seldom denied himself any pleasure, or refrained from the common vices of men, is the best beloved of all the rulers of that state. So we read,

¹ From *The Boss*, by "Henry Champernowne," chaps. iii, iv, v (copyright, 1899, by Geo. H. Richmond & Co., New York).

in one of the tales of Sir Walter Scott, of certain virtuous maiden ladies who not only harbored the Pretender, Charles Stuart, at the peril of their lives, because they thought him their lawful prince, but also gave shelter to his harlot, although ordinarily they had as lief sinned themselves as come near her.

But in the constitution of the modern city no man is regarded as superior by nature or by birth or by position to the rest, but all are equal. The rulers that are chosen are looked upon by the people less as their superiors than as their servants, and they are fond of deposing such rulers frequently, in order that they may show their power. These rulers have in the view of the law no attributes of a great and transcendent nature, they do not dare to exhibit great wealth or magnificence for fear of the jealousy of their fellow-citizens, and the latter will not permit their rulers to indulge even in those vices which they practice themselves without making complaints of their offended virtue. Hence it is not desirable for any man of ambition to be a chosen ruler, at least for a long time. For if he endeavor to rule in reality as well as in appearance he is at once hated and put in peril of the law, and another is presently chosen in his place; and if he does not try to rule in reality, he can do nothing but carry out laws made by others for the very purpose of hindering him and restraining his action. In such a career no man of ambition can take delight. But ambitious men, when not born to the rule of principalities, have always desired to make themselves princes, seeing that the hereditary prince who rules in reality may do whatever he desires, and be at the same time beloved, or not detested,—such men not considering how great is the importance of age to a dynasty. On the other hand, princes that have not been ambitious have often been overthrown and supplanted.

OF THE DIFFERENCE BETWEEN AN HEREDITARY PRINCE AND A BOSS

From what has been said it is evident that there is little likeness between an hereditary prince and a boss; for it is the peculiarity of the rule of a boss that it is neither recognized by

the laws nor openly admitted to exist even by the boss himself. So that it is absurd to speak of a boss as being a ruler by nature higher than other men, seeing that he does not proclaim himself to be a ruler at all. Upon this account he can make no display of a retinue or any of the magnificence of a prince, having no subjects, and being the apparent head of no principality. The law ascribes to him neither large powers and emoluments nor any attributes of a great and transcendent nature. Therefore he cannot take the first place at banquets or balls or entertainments given to distinguished persons that visit his city ; for why should he ? He is not the elected ruler of the city, and he does not let it be declared that he is the real ruler. He has no title and represents no trade or profession. Therefore he must be content to let others take the places of honor at all public feasts, and this he can do because he knows that the power is his ; for he is really the first who determines who shall be apparently the first.

As he can make no display as a ruler, he must beware of ostentation as a private man. The reason of this is that the peculiar danger of a boss is envy ; and if he build himself a palace, and have many servants wearing livery, and display a coat of arms, and seem to spend great sums of money in ostentation, he immediately arouses the envy of those who think they have raised him to power by their efforts. They consider that he is in nothing superior to them except in good fortune, and that they are equally entitled with him to share in the revenues which he collects ; and they are therefore always ready to plot against him if they think they can succeed. Therefore, while the magnificence of a prince delights the subjects, the luxury of a boss makes them discontented and angry ; and this is especially true of those who are his followers. They do not, like the retainers of an hereditary prince, think that his magnificence reflects glory upon them ; rather do they look upon it as plunder which the whole army has earned but which the general has kept for himself. But from the time of Achilles and Agamemnon to this day there has always been danger to generals from the division of the spoils. A wise boss will, then, make little display of wealth, more especially because it is in his power

to accumulate and possess it secretly; and he will attend to Aristotle's warning, that the haughtiness of women has been the ruin of many tyrannies. He will therefore not permit the women of his family to treat others haughtily or to insist upon precedence at feasts and tournaments, or balls as they are called, given to princes and other distinguished guests of the city. It is better for him to deal with rebellion in his own house rather than to allow the arrogance of his women to stir it up outside; and he who cannot hold the women of his family in subjection is not fit to be the ruler over a city. Let the boss therefore grasp the substance and disregard the shadow; since he is not the apparent ruler, but the real ruler, let him also be content to be really supreme in power without appearing so.

OF THE LIKENESS BETWEEN THE NEW PRINCE AND THE BOSS

Machiavelli writes of many things that do not greatly concern a boss. Thus he speaks of mixed principalities, or such as are annexed as appendages to another sovereignty, but it seldom happens in this country that one great city is annexed to another; although were the city of Brooklyn to be annexed to the city of New York that boss would be guilty of a capital error who failed to observe what Machiavelli lays down upon this point. But, for the present at least, I will not consider it. Machiavelli further discourses of those who from a private station have ascended to the dignity of princes by the favor of fortune alone; but were it possible for any man to attain the position of a boss in this way he would be at once overthrown, for the difficulty of this form of government is so great that no good fortune could sustain a boss who had no talent. As Machiavelli says, even if such men meet with few difficulties in their progress, they encounter many in maintaining their sovereignty.

Such were the Roman emperors who from a private station attained to the empire by corrupting the soldiery, for they were supported only by the pleasure and fortune of those who advanced them, — two foundations equally uncertain and insecure. They had neither the experience nor the power necessary to maintain

their position. Unless men possess superior genius or courage, how can those who have themselves always been accustomed to a private station know in what manner to govern others? Deficient in knowledge, they will be equally destitute of power, for want of supporters on whose attachment and fidelity they can depend. Such dominion, like other things in nature of premature and rapid growth, does not take sufficient root in the minds of men, but must fall with the first stroke of adversity; unless, indeed, the ruler so unexpectedly exalted possess such superior talents that he can discover at once the means of preserving his good fortune, and afterward maintain it by having recourse to the same measures which others had adopted before him. But it is better to leave fortune out of account, for a boss must not think that fortune will favor him, else he will neglect necessary precautions; neither should he believe that fortune is against him, for no great success in ruling is likely to be attained by him who expects to fail.

Neither need we at this time consider what Machiavelli says of him who by foreign arms acquires sovereignty; for the force employed by a boss is not an armed force, and since his rule is secret it is not easy to call in forces from outside, because they must act openly. Nevertheless it is not prudent for a boss to neglect anything that Machiavelli has written, as appeared lately from the example of Boss Billy Sheehan of Buffalo, who, instead of ruling by means of his own followers there, thought to strengthen himself by calling in the aid of the legislature and the governor of the state, by which means he involved himself in complete ruin.

But when Machiavelli comes to speak of private persons who have attained sovereignty without any special aid from fortune, whom he calls new princes, he lays down rules which are as important for the boss of this day as for the prince of the time when he wrote; for he observes, in his chapter entitled "Of Those who have obtained Sovereignty by their Crimes," that they are indebted neither to fortune nor to virtue. Thus Agathocles of Syracuse was of the lowest class, the son of a potter, of dissolute and wicked conduct in every relation of life; but he had such infinite ability and so much courage, as well as strength of mind and body, that after he had risen to be pretor he was able

to hold by violence what had been granted to him by the public voice. This was not owing to favor, but to his own genius; still, as Machiavelli says, it must not be called virtue to murder one's fellow-citizens, and to sacrifice one's friends, and to be insensible to the voice of faith, pity, or religion. But Oliverotto da Fermo deserves not to be put on an equality with Agathocles by Machiavelli, for he suffered himself to be deceived by Borgia, and was strangled before his rule had lasted two years; but Agathocles never trusted any one and thus was never betrayed. But after a boss has attained sovereignty he cannot continue to commit crimes of violence; and it is doubtful if it is not wiser to avoid them, so far as possible, when he is struggling to attain it, so much milder are our manners than those of our ancestors. However, many of our bosses have risen to power in this way.

Machiavelli further observes, in his chapter upon "Civil Principalities," that a private individual may attain power by the favor of his fellow-citizens, and without either violence or treason. Such a sovereignty, he says, is not to be acquired either by merit or fortune alone, but by a lucky sort of craft. And he elsewhere says that it very rarely happens, or perhaps never occurs, that a person exalts himself from a humble station to great power without employing either force or fraud, unless he attains it by gift or hereditary succession. Again, he says that there is no instance on record of a man who from an obscure station arrived at great power by the single means of open and avowed force, although he has seen others succeed by cunning alone.

Moreover, he shows that Xenophon, in his *Life of Cyrus*, deduced the inference that a prince who would make himself great must learn the art of deceiving. So it was with the Romans, for they had recourse from the very beginning to treachery and bad faith; and Machiavelli says this is always necessary for those who desire to establish their dominion over others. From all this it appears plain to me that the rules for the conduct of a boss are very nearly the same as those for the conduct of him whom Machiavelli calls the new prince; and, indeed; whoever reads his discourse will see that if he had addressed a boss he would for the most part not have written otherwise.

XXXVI

OF THE LIMITS TO THE AUTHORITY OF SOCIETY OVER THE INDIVIDUAL¹

What, then, is the rightful limit to the sovereignty of the individual over himself? Where does the authority of society begin? How much of human life should be assigned to individuality, and how much to society?

Each will receive its proper share, if each has that which more particularly concerns it. To individuality should belong the part of life in which it is chiefly the individual that is interested; to society, the part which chiefly interests society.

Though society is not founded on a contract, and though no good purpose is answered by inventing a contract in order to deduce social obligations from it, every one who receives the protection of society owes a return for the benefit, and the fact of living in society renders it indispensable that each should be bound to observe a certain line of conduct towards the rest. This conduct consists, first, in not injuring the interests of one another; or rather certain interests, which, either by express legal provision or by tacit understanding, ought to be considered as rights; and secondly, in each person's bearing his share (to be fixed on some equitable principle) of the labors and sacrifices incurred for defending the society or its members from injury and molestation. These conditions society is justified in enforcing, at all costs to those who endeavor to withhold fulfillment. Nor is this all that society may do. The acts of an individual may be hurtful to others, or wanting in due consideration for their welfare, without going the length of violating any of their constituted rights. The offender may then be justly punished by opinion though not by law. As soon as any part of a person's conduct affects prejudicially the interests of others,

¹ From the essay on Liberty, by John Stuart Mill, chap. iv, pp. 133-165.

society has jurisdiction over it, and the question whether the general welfare will or will not be promoted by interfering with it becomes open to discussion. But there is no room for entertaining any such question when a person's conduct affects the interests of no persons besides himself, or needs not affect them unless they like (all the persons concerned being of full age and the ordinary amount of understanding). In all such cases there should be perfect freedom, legal and social, to do the action and stand the consequences.

It would be a great misunderstanding of this doctrine to suppose that it is one of selfish indifference, which pretends that human beings have no business with each other's conduct in life, and that they should not concern themselves about the well-doing or well-being of one another, unless their own interest is involved. Instead of any diminution there is need of a great increase of disinterested exertion to promote the good of others. But disinterested benevolence can find other instruments to persuade people to their good than whips and scourges, either of the literal or the metaphorical sort. I am the last person to undervalue the self-regarding virtues; they are only second in importance, if even second, to the social. It is equally the business of education to cultivate both. But even education works by conviction and persuasion as well as by compulsion, and it is by the former only that, when the period of education is past, the self-regarding virtues should be inculcated. Human beings owe to each other help to distinguish the better from the worse, and encouragement to choose the former and avoid the latter. They should be forever stimulating each other to increased exercise of their higher faculties, and increased direction of their feelings and aims towards wise instead of foolish, elevating instead of degrading, objects and contemplations. But neither one person nor any number of persons is warranted in saying to another human creature of ripe years that he shall not do with his life for his own benefit what he chooses to do with it. He is the person most interested in his own well-being; the interest which any other person, except in cases of strong personal attachment can have in it is trifling compared with that

which he himself has ; the interest which society has in him individually (except as to his conduct to others) is fractional, and altogether indirect ; while, with respect to his own feelings and circumstances, the most ordinary man or woman has means of knowledge immeasurably surpassing those that can be possessed by any one else. The interference of society to overrule his judgment and purposes in what only regards himself must be grounded on general presumptions, which may be altogether wrong, and even if right are as likely as not to be misapplied to individual cases, by persons no better acquainted with the circumstances of such cases than those are who look at them merely from without. In this department, therefore, of human affairs, individuality has its proper field of action. In the conduct of human beings towards one another, it is necessary that general rules should for the most part be observed, in order that people may know what they have to expect ; but in each person's own concerns, his individual spontaneity is entitled to free exercise. Considerations to aid his judgment, exhortations to strengthen his will, may be offered to him, even obtruded on him, by others ; but he himself is the final judge. All errors which he is likely to commit against advice and warning are far outweighed by the evil of allowing others to constrain him to what they deem his good.

I do not mean that the feelings with which a person is regarded by others ought not to be in any way affected by his self-regarding qualities or deficiencies. This is neither possible nor desirable. If he is eminent in any of the qualities which conduce to his own good, he is, so far, a proper object of admiration. He is so much the nearer to the ideal perfection of human nature. If he is grossly deficient in those qualities, a sentiment the opposite of admiration will follow. There is a degree of folly, and a degree of what may be called (though the phrase is not unobjectionable) lowness or depravation of taste, which, though it cannot justify doing harm to the person who manifests it, renders him necessarily and properly an object of distaste, or, in extreme cases, even of contempt ; a person could not have the opposite qualities in due strength without entertaining these feelings. Though doing no wrong to any one, a person

may so act as to compel us to judge him and feel him to be a fool, or as a being of an inferior order; and since this judgment and feeling are a fact which he would prefer to avoid, it is doing him a service to warn him of it beforehand, as of any other disagreeable consequence to which he exposes himself. It would be well, indeed, if this good office were much more freely rendered than the common notions of politeness at present permit, and if one person could honestly point out to another that he thinks him in fault, without being considered unmannerly or presuming. We have a right, also, in various ways, to act upon our unfavorable opinion of any one, not to the oppression of his individuality, but in the exercise of ours. We are not bound, for example, to seek his society; we have a right to avoid it (though not to parade the avoidance), for we have a right to choose the society most acceptable to us. We have a right, and it may be our duty, to caution others against him, if we think his example or conversation likely to have a pernicious effect on those with whom he associates. We may give others a preference over him in optional good offices, except those which tend to his improvement. In these various modes a person may suffer very severe penalties at the hands of others, for faults which directly concern only himself; but he suffers these penalties only in so far as they are the natural and, as it were, the spontaneous consequences of the faults themselves, not because they are purposely inflicted on him for the sake of punishment. A person who shows rashness, obstinacy, self-conceit — who cannot live within moderate means — who cannot restrain himself from hurtful indulgences — who pursues animal pleasures at the expense of those of feeling and intellect — must expect to be lowered in the opinion of others, and to have a small share of their favorable sentiments, but of this he has no right to complain, unless he has merited their favor by special excellence in his social relations, and has thus established a title to their good offices, which is not affected by his demerits towards himself.

What I contend for is, that the inconveniences which are strictly inseparable from the unfavorable judgment of others are the only ones to which a person should ever be subjected

an entirely isolated being ; it is impossible for a person to do anything seriously or permanently hurtful to himself, without mischief reaching at least to his near connections, and often far beyond them. If he injures his property, he does harm to those who directly or indirectly derived support from it, and usually diminishes, by a greater or less amount, the general resources of the community. If he deteriorates his bodily or mental faculties, he not only brings evil upon all who depended on him for any portion of their happiness, but disqualifies himself for rendering the services which he owes to his fellow-creatures generally ; perhaps becomes a burden on their affection or benevolence ; and if such conduct were very frequent, hardly any offense that is committed would detract more from the general sum of good. Finally, if by his vices or follies a person does no direct harm to others, he is nevertheless (it may be said) injurious by his example, and ought to be compelled to control himself for the sake of those whom the sight or knowledge of his conduct might corrupt or mislead.

And even (it will be added) if the consequences of misconduct could be confined to the vicious or thoughtless individual, ought society to abandon to their own guidance those who are manifestly unfit for it ? If protection against themselves is confessedly due to children and persons under age, is not society equally bound to afford it to persons of mature years who are equally incapable of self-government ? If gambling, or drunkenness, or incontinence, or idleness, or uncleanness, are as injurious to happiness, and as great a hindrance to improvement, as many or most of the acts prohibited by law, why (it may be asked) should not law, so far as is consistent with practicability and social convenience, endeavor to repress these also ? And as a supplement to the unavoidable imperfections of law, ought not opinion at least to organize a powerful police against these vices, and visit rigidly with social penalties those who are known to practice them ? There is no question here (it may be said) about restricting individuality, or impeding the trial of new and original experiments in living. The only things it is sought to prevent are things which have been tried and condemned from

the beginning of the world until now ; things which experience has shown not to be useful or suitable to any person's individuality. There must be some length of time and amount of experience, after which a moral or prudential truth may be regarded as established; and it is merely desired to prevent generation after generation from falling over the same precipice which has been fatal to their predecessors.

I fully admit that the mischief which a person does to himself may seriously affect, both through their sympathies and their interests, those nearly connected with him, and in a minor degree, society at large. When, by conduct of this sort, a person is led to violate a distinct and assignable obligation to any other person or persons, the case is taken out of the self-regarding class, and becomes amenable to moral disapprobation in the proper sense of the term. If, for example, a man, through intemperance or extravagance, becomes unable to pay his debts, or, having undertaken the moral responsibility of a family, becomes from the same cause incapable of supporting or educating them, he is deservedly reprobated, and might be justly punished ; but it is for the breach of duty to his family or creditors, not for the extravagance. If the resources which ought to have been devoted to them had been diverted from them for the most prudent investment, the moral culpability would have been the same. George Barnwell murdered his uncle to get money for his mistress, but if he had done it to set himself up in business he would equally have been hanged. Again, in the frequent case of a man who causes grief to his family by addiction to bad habits, he deserves reproach for his unkindness or ingratitude ; but so he may for cultivating habits not in themselves vicious, if they are painful to those with whom he passes his life, or who from personal ties are dependent on him for their comfort. Whoever fails in the consideration generally due to the interests and feelings of others, not being compelled by some more imperative duty, or justified by allowable self-preference, is a subject of moral disapprobation for that failure, but not for the cause of it, nor for the errors, merely personal to himself, which may have remotely led to it. In like manner, when a person disables

himself, by conduct purely self-regarding, from the performance of some definite duty incumbent on him to the public, he is guilty of a social offense. No person ought to be punished simply for being drunk; but a soldier or a policeman should be punished for being drunk on duty. Whenever, in short, there is a definite damage, or a definite risk of damage, either to an individual or to the public, the case is taken out of the province of liberty, and placed in that of morality or law.

But with regard to the merely contingent, or, as it may be called, constructive injury which a person causes to society, by conduct which neither violates any specific duty to the public nor occasions perceptible hurt to any assignable individual except himself, the inconvenience is one which society can afford to bear, for the sake of the greater good of human freedom. If grown persons are to be punished for not taking proper care of themselves, I would rather it were for their own sake than under pretense of preventing them from impairing their capacity of rendering to society benefits which society does not pretend it has a right to exact. But I cannot consent to argue the point as if society had no means of bringing its weaker members up to its ordinary standard of rational conduct, except waiting till they do something irrational, and then punishing them, legally or morally, for it. Society has had absolute power over them during all the early portion of their existence: it has had the whole period of childhood and nonage in which to try whether it could make them capable of rational conduct in life. The existing generation is master both of the training and the entire circumstances of the generation to come; it cannot indeed make them perfectly wise and good, because it is itself so lamentably deficient in goodness and wisdom; and its best efforts are not always, in individual cases, its most successful ones; but it is perfectly well able to make the rising generation, as a whole, as good as, and a little better than, itself. If society lets any considerable number of its members grow up mere children, incapable of being acted on by rational consideration of distant motives, society has itself to blame for the consequences. Armed not only with all the powers of education but with the ascendancy

which the authority of a received opinion always exercises over the minds that are least fitted to judge for themselves; and aided by the *natural* penalties which cannot be prevented from falling on those who incur the distaste or the contempt of those who know them, — let not society pretend that it needs, besides all this, the power to issue commands and enforce obedience in the personal concerns of individuals, in which, on all principles of justice and policy, the decision ought to rest with those who are to abide the consequences. Nor is there anything which tends more to discredit and frustrate the better means of influencing conduct than a resort to the worse. If there be among those whom it is attempted to coerce into prudence or temperance any of the material of which vigorous and independent characters are made, they will infallibly rebel against the yoke. No such person will ever feel that others have a right to control him in his concerns, such as they have to prevent him from injuring them in theirs; and it easily comes to be considered a mark of spirit and courage to fly in the face of such usurped authority, and do with ostentation the exact opposite of what it enjoins; as in the fashion of grossness which succeeded, in the time of Charles II, to the fanatical moral intolerance of the Puritans. With respect to what is said of the necessity of protecting society from the bad example set to others by the vicious or the self-indulgent, it is true that bad example may have a pernicious effect, especially the example of doing wrong to others with impunity to the wrongdoer. But we are now speaking of conduct which, while it does no wrong to others, is supposed to do great harm to the agent himself; and I do not see how those who believe this can think otherwise than that the example, on the whole, must be more salutary than hurtful, since if it displays the misconduct, it displays also the painful or degrading consequences which, if the conduct is justly censured, must be supposed to be in all or most cases attendant on it.

But the strongest of all the arguments against the interference of the public with purely personal conduct is that when it does interfere the odds are that it interferes wrongly and in the wrong place. On questions of social morality, of duty to

others, the opinion of the public, that is of an overruling majority, though often wrong, is likely to be still oftener right; because on such questions they are only required to judge of their own interests; of the manner in which some mode of conduct, if allowed to be practiced, would affect themselves. But the opinion of a similar majority, imposed as a law on the minority, on questions of self-regarding conduct, is quite as likely to be wrong as right; for in these cases public opinion means, at the best, some people's opinion of what is good or bad for other people; while very often it does not even mean that; the public, with the most perfect indifference, passing over the pleasure or convenience of those whose conduct they censure, and considering only their own preference. There are many who consider as an injury to themselves any conduct which they have a distaste for, and resent it as an outrage to their feelings; as a religious bigot, when charged with disregarding the religious feelings of others, has been known to retort that they disregard his feelings, by persisting in their abominable worship or creed. But there is no parity between the feeling of a person for his own opinion and the feeling of another who is offended at his holding it, any more than between the desire of a thief to take a purse and the desire of the right owner to keep it. And a person's taste is as much his own peculiar concern as his opinion or his purse. It is easy for any one to imagine an ideal public, which leaves the freedom and choice of individuals in all uncertain matters undisturbed, and only requires them to abstain from modes of conduct which universal experience has condemned. But where has there been seen a public which set any such limit to its censorship? or when does the public trouble itself about universal experience? In its interferences with personal conduct it is seldom thinking of anything but the enormity of acting or feeling differently from itself; and this standard of judgment, thinly disguised, is held up to mankind as a dictate of religion and philosophy, by nine tenths of all moralists and speculative writers. These teach that things are right because they are right; because we feel them to be so. They tell us to search in our own minds and hearts for laws of conduct binding on

ourselves and on all others. What can the poor public do but apply these instructions, and make their own personal feelings of good and evil, if they are tolerably unanimous in them, obligatory on all the world?

The evil here pointed out is not one which exists only in theory; and it may perhaps be expected that I should specify the instances in which the public of this age and country improperly invests its own preferences with the character of moral laws. I am not writing an essay on the aberrations of existing moral feeling. That is too weighty a subject to be discussed parenthetically and by way of illustration. Yet examples are necessary, to show that the principle I maintain is of serious and practical moment, and that I am not endeavoring to erect a barrier against imaginary evils. And it is not difficult to show, by abundant instances, that to extend the bounds of what may be called moral police until it encroaches on the most unquestionably legitimate liberty of the individual, is one of the most universal of all human propensities.

As a first instance, consider the antipathies which men cherish on no better grounds than that persons whose religious opinions are different from theirs do not practice their religious observances, especially their religious abstinences. To cite a rather trivial example, nothing in the creed or practice of Christians does more to envenom the hatred of Mohammedans against them than the fact of their eating pork. There are few acts which Christians and Europeans regard with more unaffected disgust than Mussulmans regard this particular mode of satisfying hunger. It is, in the first place, an offense against their religion; but this circumstance by no means explains either the degree or the kind of their repugnance; for wine also is forbidden by their religion, and to partake of it is by all Mussulmans accounted wrong but not disgusting. Their aversion to the flesh of the "unclean beast" is, on the contrary, of that peculiar character, resembling an instinctive antipathy, which the idea of uncleanness, when once it thoroughly sinks into the feelings, seems always to excite even in those whose personal habits are anything but scrupulously cleanly, and of which the sentiment of

religious impurity, so intense in the Hindus, is a remarkable example. Suppose now that in a people of whom the majority were Mussulmans, that majority should insist upon not permitting pork to be eaten within the limits of the country. This would be nothing new in Mohammedan countries.¹ Would it be a legitimate exercise of the moral authority of public opinion? and if not, why not? The practice is really revolting to such a public. They also sincerely think that it is forbidden and abhorred by the Deity. Neither could the prohibition be censured as religious persecution. It might be religious in its origin, but it would not be persecution for religion, since nobody's religion makes it a duty to eat pork. The only tenable ground of condemnation would be, that with the personal tastes and self-regarding concerns of individuals the public has no business to interfere.

To come somewhat nearer home: the majority of Spaniards consider it a gross impiety, offensive in the highest degree to the Supreme Being, to worship him in any other manner than the Roman Catholic; and no other public worship is lawful on Spanish soil. The people of all southern Europe look upon a married clergy as not only irreligious but unchaste, indecent, gross, disgusting. What do Protestants think of these perfectly sincere feelings, and of the attempt to enforce them against non-Catholics? Yet, if mankind are justified in interfering with each other's liberty in things which do not concern the interests of others, on what principle is it possible consistently to exclude these cases? or who can blame people for desiring to suppress what they regard as a scandal in the sight of God and man? No stronger case can be shown for prohibiting anything which is

¹ The case of the Bombay Parsees is a curious instance in point. When this industrious and enterprising tribe, the descendants of the Persian fire-worshippers, flying from their native country before the Caliphs, arrived in western India, they were admitted to toleration by the Hindu sovereigns on condition of not eating beef. When those regions afterwards fell under the dominion of Mohammedan conquerors, the Parsees obtained from them a continuance of indulgence on condition of refraining from pork. What was at first obedience to authority became a second nature, and the Parsees to this day abstain both from beef and pork. Though not required by their religion, the double abstinence has had time to grow into a custom of their tribe; and custom in the East is a religion.

regarded as a personal immorality than is made out for suppressing these practices in the eyes of those who regard them as impieties ; and unless we are willing to adopt the logic of persecutors, and to say that we may persecute others because we are right, and that they must not persecute us because they are wrong, we must beware of admitting a principle of which we should resent as a gross injustice the application to ourselves.

The preceding instances may be objected to, although unreasonably, as drawn from contingencies impossible among us ; opinion, in this country, not being likely to enforce abstinence from meats, or to interfere with people for worshipping, and for either marrying or not marrying, according to their creed or inclination. The next example, however, shall be taken from an interference with liberty which we have by no means passed all danger of. Wherever the Puritans have been sufficiently powerful, as in New England, and in Great Britain at the time of the Commonwealth, they have endeavored, with considerable success, to put down all public, and nearly all private, amusements, especially music, dancing, public games, or other assemblages for purposes of diversion, and the theater. There are still in this country large bodies of persons by whose notions of morality and religion these recreations are condemned ; and those persons belonging chiefly to the middle class, who are the ascendant power in the present social and political condition of the kingdom, it is by no means impossible that persons of these sentiments may at some time or other command a majority in Parliament. How will the remaining portion of the community like to have the amusements that shall be permitted to them regulated by the religious and moral sentiments of the stricter Calvinists and Methodists ? Would they not, with considerable peremptoriness, desire these intrusively pious members of society to mind their own business ? This is precisely what should be said to every government and every public who have the pretension that no person shall enjoy any pleasure which they think wrong. But if the principle of the pretension be admitted, no one can reasonably object to its being acted on in the sense of the majority, or other preponderating power in the country ; and

all persons must be ready to conform to the idea of a Christian commonwealth, as understood by the early settlers in New England, if a religious profession similar to theirs should ever succeed in regaining its lost ground, as religions supposed to be declining have so often been known to do.

To imagine another contingency, perhaps more likely to be realized than the one last mentioned, there is confessedly a strong tendency in the modern world towards a democratic constitution of society, accompanied or not by popular political institutions. It is affirmed that in the country where this tendency is most completely realized, where both society and the government are most democratic, — the United States, — the feeling of the majority, to whom any appearance of a more showy or costly style of living than they can hope to rival is disagreeable, operates as a tolerably effectual sumptuary law, and that in many parts of the Union it is really difficult for a person possessing a very large income to find any mode of spending it which will not incur popular disapprobation. Though such statements as these are doubtless much exaggerated as a representation of existing facts, the state of things they describe is not only a conceivable and possible but a probable result of democratic feeling, combined with the notion that the public has a right to a veto on the manner in which individuals shall spend their incomes. We have only further to suppose a considerable diffusion of socialist opinions, and it may become infamous in the eyes of the majority to possess more property than some very small amount, or any income not earned by manual labor. Opinions similar in principle to these already prevail widely among the artisan class, and weigh oppressively on those who are amenable to the opinion chiefly of that class, namely, its own members. It is known that the bad workmen, who form the majority of the operatives in many branches of industry, are decidedly of opinion that bad workmen ought to receive the same wages as good, and that no one ought to be allowed, through piecework or otherwise, to earn by superior skill or industry more than others can without it. And they employ a moral police, which occasionally becomes a physical one, to deter skillful workmen

from receiving, and employers from giving, a larger remuneration for a more useful service. If the public have any jurisdiction over private concerns, I cannot see that these people are in fault, or that any individual's particular public can be blamed for asserting the same authority over his individual conduct which the general public asserts over people in general.

But without dwelling upon supposititious cases, there are, in our own day, gross usurpations upon the liberty of private life actually practiced, and still greater ones threatened with some expectation of success, and opinions proposed which assert an unlimited right in the public not only to prohibit by law everything which it thinks wrong, but in order to get at what it thinks wrong, to prohibit any number of things which it admits to be innocent.

Under the name of preventing intemperance, the people of one English colony, and of nearly half the United States, have been interdicted by law from making any use whatever of fermented drinks, except for medical purposes; for prohibition of their sale is in fact, as it is intended to be, prohibition of their use. And though the impracticability of executing the law has caused its repeal in several of the states which had adopted it, including the one from which it derives its name, an attempt has notwithstanding been commenced, and is prosecuted with considerable zeal by many of the professed philanthropists, to agitate for a similar law in this country. The association, or "Alliance," as it terms itself, which has been formed for this purpose, has acquired some notoriety through the publicity given to a correspondence between its secretary and one of the very few English public men who hold that a politician's opinions ought to be founded on principles. Lord Stanley's share in this correspondence is calculated to strengthen the hopes already built on him, by those who know how rare such qualities as are manifested in some of his public appearances unhappily are among those who figure in political life. The organ of the Alliance, who would "deeply deplore the recognition of any principle which could be wrested to justify bigotry and persecution," undertakes to point out the "broad and impassable barrier"

which divides such principles from those of the association. "All matters relating to thought, opinion, conscience, appear to me," he says, "to be without the sphere of legislation; all pertaining to social act, habit, relation, subject only to a discretionary power vested in the state itself, and not in the individual, to be within it." No mention is made of a third class, different from either of these, namely, acts and habits which are not social but individual, although it is to this class, surely, that the act of drinking fermented liquors belongs. Selling fermented liquors, however, is trading, and trading is a social act. But the infringement complained of is not on the liberty of the seller, but on that of the buyer and consumer, since the state might just as well forbid him to drink wine as purposely make it impossible for him to obtain it. The secretary, however, says, "I claim, as a citizen, a right to legislate whenever my social rights are invaded by the social act of another." And now for the definition of these "social rights." "If anything invades my social rights, certainly the traffic in strong drink does. It destroys my primary right of security, by constantly creating and stimulating social disorder. It invades my right of equality, by deriving a profit from the creation of a misery I am taxed to support. It impedes my right to free moral and intellectual development, by surrounding my path with dangers, and by weakening and demoralizing society, from which I have a right to claim mutual aid and intercourse." A theory of "social rights" the like of which probably never before found its way into distinct language, being nothing short of this,—that it is the absolute social right of every individual that every other individual shall act in every respect exactly as he ought, that whosoever fails thereof in the smallest particular violates my social right and entitles me to demand from the legislature the removal of the grievance. So monstrous a principle is far more dangerous than any single interference with liberty; there is no violation of liberty which it would not justify; it acknowledges no right to any freedom whatever, except perhaps to that of holding opinions in secret without ever disclosing them; for the moment an opinion which I consider noxious passes any one's

lips, it invades all the "social rights" attributed to me by the Alliance. The doctrine ascribes to all mankind a vested interest in each other's moral, intellectual, and even physical perfection, to be defined by each claimant according to his own standard.

Another important example of illegitimate interference with the rightful liberty of the individual, not simply threatened but long since carried into triumphant effect, is Sabbatarian legislation. Without doubt, abstinence on one day in the week, so far as the exigencies of life permit, from the usual daily occupation, though in no respect religiously binding on any except Jews, is a highly beneficial custom. And inasmuch as this custom cannot be observed without a general consent to that effect among the industrious classes, therefore, in so far as some persons by working may impose the same necessity on others, it may be allowable and right that the law should guarantee to each the observance by others of the custom by suspending the greater operations of industry on a particular day. But this justification, grounded on the direct interest which others have in each individual's observance of the practice, does not apply to the self-chosen occupations in which a person may think fit to employ his leisure; nor does it hold good, in the smallest degree, for legal restrictions on amusements. It is true that the amusement of some is the day's work of others; but the pleasure, not to say the useful recreation, of many is worth the labor of a few, provided the occupation is freely chosen and can be freely resigned. The operatives are perfectly right in thinking that if all worked on Sunday, seven days' work would have to be given for six days' wages; but so long as the great mass of employments are suspended, the small number who for the enjoyment of others must still work, obtain a proportional increase of earnings; and they are not obliged to follow those occupations, if they prefer leisure to emolument. If a further remedy is sought, it might be found in the establishment by custom of a holiday on some other day of the week for those particular classes of persons. The only ground, therefore, on which restrictions on Sunday amusements can be defended must be that they are religiously wrong, — a motive of legislation which never

can be too earnestly protested against. *Deorum injuriæ Diis curæ*. It remains to be proved that society or any of its officers holds a commission from on high to avenge any supposed offense to Omnipotence which is not also a wrong to our fellow-creatures. The notion that it is one man's duty that another should be religious was the foundation of all the religious persecutions ever perpetrated, and if admitted would fully justify them. Though the feeling which breaks out in the repeated attempts to stop railway traveling on Sunday, in the resistance to the opening of museums, and the like, has not the cruelty of the old persecutors, the state of mind indicated by it is fundamentally the same. It is a determination not to tolerate others in doing what is permitted by their religion because it is not permitted by the persecutor's religion. It is a belief that God not only abominates the act of the misbeliever but will not hold us guiltless if we leave him unmolested.

I cannot refrain from adding to these examples of the little account commonly made of human liberty, the language of downright persecution which breaks out from the press of this country, whenever it feels called on to notice the remarkable phenomenon of Mormonism. Much might be said on the unexpected and instructive fact, that an alleged new revelation, and a religion founded on it, the product of palpable imposture, not even supported by the *prestige* of extraordinary qualities in its founder, is believed by hundreds of thousands, and has been made the foundation of a society, in the age of newspapers, railways, and the electric telegraph. What here concerns us is, that this religion, like other and better religions, has its martyrs; that its prophet and founder was, for his teaching, put to death by a mob; that others of its adherents lost their lives by the same lawless violence; that they were forcibly expelled, in a body, from the country in which they first grew up; while, now that they have been chased into a solitary recess in the midst of a desert, many in this country openly declare that it would be right (only that it is not convenient) to send an expedition against them, and compel them by force to conform to the opinions of other people. The article of the Mormonite doctrine,

which is the chief provocative to the antipathy which thus breaks through the ordinary restraints of religious tolerance, is its sanction of polygamy, which, though permitted to Mohammedans, and Hindus, and Chinese, seems to excite unquenchable animosity when practiced by persons who speak English and profess to be a kind of Christians. No one has a deeper disapprobation than I have of this Mormon institution, both for other reasons and because, far from being in any way countenanced by the principle of liberty, it is a direct infraction of that principle, being a mere riveting of the chains of one half of the community, and an emancipation of the other from reciprocity of obligation towards them. Still, it must be remembered that this relation is as much voluntary on the part of the women concerned in it, and who may be deemed the sufferers by it, as is the case with any other form of the marriage institution; and however surprising this fact may appear, it has its explanation in the common ideas and customs of the world, which, teaching women to think marriage the one thing needful, makes it intelligible that many a woman should prefer being one of several wives to not being a wife at all. Other countries are not asked to recognize such unions, or release any portion of their inhabitants from their own laws on the score of Mormonite opinions. But when the dissentients have conceded to the hostile sentiments of others, far more than could justly be demanded; when they have left the countries to which their doctrines were unacceptable, and established themselves in a remote corner of the earth, which they have been the first to render habitable to human beings, — it is difficult to see on what principles but those of tyranny they can be prevented from living there under what laws they please, provided they commit no aggression on other nations, and allow perfect freedom of departure to those who are dissatisfied with their ways. A recent writer, in some respects of considerable merit, proposes (to use his own words) not a crusade, but a *civilizade*, against this polygamous community, to put an end to what seems to him a retrograde step in civilization. It also appears so to me, but I am not aware that any community has a right to force another to

be civilized. So long as the sufferers by the bad law do not invoke assistance from other communities, I cannot admit that persons entirely unconnected with them ought to step in and require that a condition of things with which all who are directly interested appear to be satisfied should be put an end to because it is a scandal to persons some thousands of miles distant, who have no part or concern in it. Let them send missionaries, if they please, to preach against it; and let them, by any fair means (of which silencing the teachers is not one), oppose the progress of similar doctrines among their own people. If civilization has got the better of barbarism when barbarism had the world to itself, it is too much to profess to be afraid lest barbarism, after having been fairly got under, should revive and conquer civilization. A civilization that can thus succumb to its vanquished enemy must first have become so degenerate that neither its appointed priests and teachers, nor anybody else, has the capacity, or will take the trouble, to stand up for it. If this be so, the sooner such a civilization receives notice to quit, the better. It can only go on from bad to worse, until destroyed and regenerated (like the Western Empire) by energetic barbarians.

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INDEX

- Adaptation, passive and active, 9
- Altruism, 593-630
- Aristotle, 750-763
- Bagehot, Walter, 501-502, 718-749
- Buckle, Henry Thomas, 174-270, 419-471, 522-576
- "Champernowne, Henry," 782-787
- Comte, Auguste, 15-70, 88-115
- Conservatism, importance of, 501-502
- Crime and punishment, evolutionary function of, 654-676
- Darwin, Charles, 276-391
- Degeneration, causes of, 708-715; symptoms of, 697-708
- Discussion, as a conservative force, 737-744; essential to progress, 718-724
- Drummond, Henry, 593-630
- Family relations, evolution of, 593-630
- Fiske, John, 121-126, 410-418, 478-480
- Foresight, 478-480
- Galton, Francis, 631-646
- Genius, the relativity of, 498-500
- Geography, influence of, on social development, 174-270
- Godkin, Edward Lawrence, 716-717
- Government, best form of, 756-761; influence of, 562-576
- Hall, A. Cleveland, 654-673
- History, economic interpretation of, 3-7
- Idealization, power of, 11
- Ideals of beauty, influence of, on physical development, 350-391
- Imitation, 503-521; laws of, 511-521
- Individual, relation of, to the state, 788-808
- Infancy, prolongation of, 410-418; social influence of, 415-418
- Intellectual development, influence of, on social progress, 419-471
- Kidd, Benjamin, 481-497
- Lapouge, G. Vâcher de, 647-653
- Literature, influence of, 557-562
- Macaulay, Thomas Babington, 498-500
- Machiavelli, Nicholas, 764-781
- Maternal instinct, evolution of, 593-630
- Method, of observation, 48-52; of experiment, 52-54; of comparison, 54-63; of analysis, 64
- Method of sociology, positive, 15-64
- Mill, John Stuart, 788-808
- Monarch, resemblance of, to the boss, 782-787
- Monarchy, how it is built up and maintained, 764-781
- Morality, dependence of, upon social necessity, 577-592; influence of, on social progress, 419-471; sociological view of, 577-592
- Nature, aspects of, influence on the intellect, 244-270
- Nordau, Max, 697-715
- Pain economy, transition from, to a pleasure economy, 127-132
- Patten, Simon N., 127-132
- Pearson, Karl, 392-409
- Peschel, Oscar, 271-275

- Population, quality of, 392-409, 631-646
 Positive method of sociology, 15-64
 Prevision of social phenomena, 22
 Progress, definition of, 7-9; stages of, 90-115
 Religion, definition of, 486; function of, in social progress, 481-497; influence of, 545-557; zone of the founders of, 271-275
 Ripley, William Z., 676-696
 Robinson, Edward Van Dyke, 133-173
 Selection, natural and social, 647-654; sexual, in relation to man, 276-391; social, 641-646, 647-654; urban, 676-696
 Smith, Adam, 472-477
 Social dynamics, theory of, 88-116
 Social evolution, 121-126; influence of religion on, 481-497
 Social phenomena modifiable, 42-47
 Social progress, defined, 116-120; direction of, 88-173; factors of, 174-804; physical and biological factors of, 174-418; psychical factors of, 419-521; social and economic factors of, 522-715; political and legal factors of, 716-804
 Social science, spirit of, 23-24
 Sociation, 79-87
 Sociology, as a study of social progress, 88-173; relation of, to other sciences, 65-70; relation of, to biology, 65-68; relation of, to physics, 69-70; relation of, to the special social sciences, 71-87; relation of, to political science, 72-75; relation of, to political economy, 75-78
 Spencer, Herbert, 577-592
 State interference, limits of, 788-808
 State, relation of, to individual, 788-808
 Statical and dynamical sociology, distinction between, 32-33
 Stuckenberg, J. H. W., 71-87
 Stupidity, virtues of, 501-502
 Surplus energy of society, 12-13
 Sympathy, 472-477
 Talk, influence of, 716-717
 Tarde, Gabriel, 503-521
 War and economics, 133-173
 Ward, Lester F., 116-120, 674-675



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